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Tickle J. A TOPICAL HAEMOGLOBIN SPRAY FOR OXYGENATING PRESSURE ULCERS: A PILOT STUDY. Br J Community Nurs. 2015 Mar; Suppl Wound Care: S. 12, S. 14-8


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EWMA celebrates the 25th anniversary

Throughout the year, EWMA celebrates the 25th anniversary of the Association. As this represents one of the first significant milestones for EWMA, we have used the opportunity to dig into the EWMA archives and memories of key players of the Association. This made us realise once again that EWMA has played a vital role in the development of wound care over the past 25 years. In this issue of the EWMA Journal we invite our readers to learn more about EWMA’s history and development since the constitution in 1991, in a series of articles as well as EWMA facts and figures.

The role and obligations of the many associations representing health care professionals working within different disease domains varies according to their topic of interest and national or international level of operation. However, for most associations, the network and good collaboration with partner organisations and stakeholders is key to a continuous development and successful achievement of goals. By establishing and safeguarding a strong multidisciplinary profile, as well as exchange of knowledge and challenges experienced in the different European countries and internationally, EWMA has consistently aimed to define focus topics with a high degree of topicality and relevance for individual members as well as our collaborating partner organisations. We would like to use the opportunity to thank the EWMA Cooperating Organisations for the close collaboration (the formal collaboration was established in 2001) and the international partner organisations for common discussions and collaboration on various activities such as joint documents and awareness campaigns or conference session exchanges.

Finally, we would like to thank our corporate sponsors for their stable support of EWMA’s core activities. Some of the companies which are still supporting EWMA today have been with us from the early years and both these and new sponsors have earned our gratitude for ensuring a steady financial basis for EWMA to work on.

Last, but not least, an association is constituted by the people behind it. EWMA would not have been where it is today, without the active EWMA presidents and council members who represent the faces of the association during the time of their involvement. Many have stayed involved in EWMA after the end of their term, to contribute to the work of EWMA Committees and project working groups.

By consistently honouring visionary ideas from the key people involved and striving to develop and to address the current challenges in wound management, EWMA has managed to stay a vibrant association today, 25 years after the constitution.

We look forward to the continuous collaboration with all our partners and stakeholders.

Severin Lächli, EWMA President
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Development of an evidence-based global consensus for diabetic foot disease:

The 2015 guidance of the International Working Group on the Diabetic Foot

ABSTRACT

Background
Foot complications are a frequent and severe complication of diabetes. To prevent, or at least reduce, the incidence and adverse outcomes of these foot problems, the International Working Group on the Diabetic Foot (IWGDF) develops and updates evidence-based global consensus guidance documents.

Aim
To describe the development of the 2015 IWGDF Guidance documents on the prevention and management of foot problems in persons with diabetes.

Methods
The IWGDF empanelled five working groups of international experts to undertake seven systematic reviews of the literature. These were designed to provide evidence to support development of guidance documents on five topics: prevention; footwear and offloading; diagnosis, prognosis and management of peripheral artery disease; diagnosis and management of foot infections; and interventions to enhance healing.

Results
The five 2015 IWGDF guidance documents make a total of 77 recommendations, each of which was assigned a Grading of Recommendations, Assessment, Development, and Evaluation (GRADE) rating. These documents are now published and available for free on the IWGDF website.

Conclusions
We believe clinician compliance with the recommendations of the 2015 IWGDF Guidance documents will likely result in a reduction in, or better outcomes of, foot problems in persons with diabetes, helping to reduce the morbidity and mortality associated with this problem.

INTRODUCTION

The International Diabetes Federation estimates that by 2035 the global prevalence of diabetes mellitus will rise to almost 600 million, and around 80% of these people will live in low- and middle-income countries. Foot problems are a frequent consequence of diabetes and a major cause of morbidity, mortality, and financial costs. The frequency, type, and severity of foot problems varies within and among geographical regions, largely due to differences in socioeconomic conditions, prevalence of various comorbidities, type of footwear worn, and standards of foot care. Ulcers of the foot, usually related to peripheral neuropathy, are the most common foot complication, with a yearly incidence of around 2-4% in high-income countries and likely even higher in developing countries.

Managing diabetic foot ulcers requires local, and often systemic, treatments given by knowledgeable providers to adherent patients. This is not a “one doctor disease”—optimising outcomes requires multidisciplinary care. Furthermore, as a
notoriously unglamorous problem, appropriate care of the diabetic foot depends on dedicated clinicians working together in a team of health-care providers to care for a complex patient – a scenario some clinicians prefer to avoid, but others relish.3

When a foot complication develops in a person with diabetes, it not only represents a major personal tragedy, but also affects that person’s family and places a substantial financial burden on the patient, the healthcare system, and society in general. In low-income countries, the cost of treating a complex diabetic foot ulcer can be equivalent to 5.7 years of annual income, potentially resulting in financial ruin for these patients and their families.4 Investing in evidence-based, internationally appropriate diabetic foot care guidance is likely among the most cost-effective forms of healthcare expenditure, provided it is goal-focused and properly implemented.5,6

The International Working Group on the Diabetic Foot (IWGDF) was founded in 1996 and includes experts from virtually all of the many disciplines involved in the care of patients with diabetes and consequent foot problems. Among the goals of the IWGDF are to prevent, or at least reduce, the adverse effects of foot problems in persons with diabetes in part by developing and continuously updating international guidance documents for use by all health care providers involved in diabetic foot care.7 In 1999, the IWGDF first published “International Consensus on the Diabetic Foot” and “Practical Guidelines on the Management and the Prevention of the Diabetic Foot.” Various versions of these documents have been translated into 26 languages, and more than 100,000 copies have been distributed globally. In 2015, the most recent version of the “IWGDF Guidance on the Prevention of Foot Problems in Diabetes” was published.7–20

METHODS
The IWGDF Editorial Board selected chairs and, in collaboration with the chairs, a secretary and about a dozen international expert members for each of five working groups. Each group was assigned to produce a guidance document on one of the following topics:

- Prevention of foot ulcers in at-risk patients with diabetes,
- Footwear and offloading to prevent and heal foot ulcers in diabetes,
- Diagnosis, prognosis, and management of peripheral artery disease in diabetic patients with foot ulcers,
- Diagnosis and management of foot infections in persons with diabetes, and
- Interventions to enhance healing of chronic ulcers of the foot in diabetes.

Each of the five working groups followed the same methods in producing its guidance document. First, each group performed a systematic review of a selected aspect of the available literature on its topic. The working groups produced seven systematic reviews (the peripheral-arterial-disease group produced three) that included over 80,000 articles for screening, of which they selected 429 for final analyses.14–20 Following the systematic review, the working group members formulated recommendations that they developed based on the Grading of Recommendations, Assessment, Development, and Evaluation (GRADE) system for grading evidence.21 This system allowed the experts to link the available scientific evidence to specific recommendations for daily clinical practice. Each recommendation was rated as either strong or weak, and the quality of the evidence underlying this recommendation as high, moderate, or low. Interested readers are referred to reference 7 for further information on the grading system used. When the five guidance documents were completed, the Editorial Board sent them to over 100 IWGDF expert representatives, asking for their comments and, after revision of the documents, to obtain their approval. Finally, the IWGDF Editorial Board produced a “Summary Guidance for Daily Practice” based on these five documents; this summary was designed to serve as a short outline of the essential approaches to the prevention and management of foot problems in diabetes.

RESULTS
The IWGDF Guidance on the Prevention and Management of Foot Problems in Diabetes consists of seven chapters: the five guidance documents discussed above;8–12 the summary on the development of the guidance;7 and the summary guidance for daily practice.13

These documents make clear the factors involved in the pathogenesis of diabetic foot disease, particularly peripheral sensory (and motor) neuropathy and peripheral arterial disease. Treatment is most effective when it involves clinicians who are experts in medical, surgical, podiatric, nursing, and other specialties. It is also crucial that these specialists use an integrated, interdisciplinary approach to optimise clinical and technological methods for management.3 From the five cornerstones of prevention, to an effective and well-organised team, prevention and management of foot problems in diabetes requires a multidisciplinary approach that covers all bases.8

At the core of the 2015 IWGDF guidance are the 77 total recommendations provided in the seven different guidance documents. Rather than outline these recommendations in
In 2015, for the fifth time since 1999, the IWGDF updated, expanded, and improved their guidance on the prevention and management of foot problems in diabetes. Improvements on earlier versions include having a systematic review for at least one key aspect of each topic and grading the strength and quality of recommendations using the GRADE system. The IWGDF Editorial Board also made special efforts to seek review of the documents by experts in many fields from countries all over the world. These efforts have resulted in evidence-based, global consensus guidance.7-20

The principles and recommendations outlined in this new guidance will now have to be adapted or modified for different countries, taking into account local and regional differences in the socioeconomic situation, accessibility to and sophistication of healthcare resources, and various cultural factors. Once modified into a local guideline, the next crucial step is implementation. Only when the guidelines are used in daily clinical practice throughout the world will they be able to contribute to improvement in outcomes for diabetic patients with foot problems.

On a pre-planned Consensus-Implementation Day immediately prior to the 7th International Symposium on the Diabetic Foot, held May 19th 2015 in The Hague, the leaders of the IWGDF invited all of the international representatives of the organisation to convene to discuss implementation of the IWGDF Guidance documents. Nearly 100 representatives from six continents attended and discussed the next steps. These local “champions” are the trailblazers, bringing back home their knowledge, ideas, and enthusiasm to inspire others. Some of them have already made major steps in implementation, such as with national diabetic foot care programs in the United Kingdom,21 Belgium22 and Germany,23 and with “Step-by-Step,” a program developed by the International Diabetes Federation, IWGDF, and the World Diabetes Federation, in close cooperation with many local frontrunners to help less technologically advanced countries improve diabetic foot care.24 With the worldwide diabetes epidemic, it is now more imperative than ever that more countries and clinicians follow these, or other, paths to improved foot care. All people with diabetes, regardless of their age, geographic location, and socioeconomic status, need access to quality, evidence-based foot care. Notwithstanding the limited published evidence of improved outcomes associated with using these guidance documents, we believe that following the recommendations of the 2015 IWGDF Guidance will almost certainly result in improved management of diabetic foot problems and a subsequent worldwide reduction in the largely preventable tragedies they cause.

**DISCUSSION**

**IMPLICATIONS FOR CLINICAL PRACTICE**

The “2015 IWGDF Guidance on the Prevention and Management of Foot Problems in Diabetes” provides clinicians with an evidence-based, practical, global consensus guidance. With a summary guidance for clinical practice and 77 recommendations (each assessed for the strength of the recommendation and the quality of the supporting evidence), this document summarises the most important steps in prevention and treatment of diabetic foot problems. Following these recommendations will almost certainly result in improved management of foot problems in diabetes and a subsequent worldwide reduction in the largely preventable tragedies they cause.

**FURTHER RESEARCH**

Different chapters of the guidance outline areas for further research in the field of foot problems in Diabetes. Apart from these specific topics, we encourage those interested in the field to consider doing research into the effectiveness of guidance implementation to improve outcomes of diabetic foot disease.


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Clinical challenges of differentiating skin tears from pressure ulcers

ABSTRACT

Background
Skin tears can have a profound impact on the health and well-being of an individual, the consequences of which are often underestimated. Those affected report that skin tears both increase pain and compromise overall quality of life. Persons at the extremes of age and the critically/chronically ill represent the populations most at risk for skin tears and ensuing complications, such as wound infections, impaired mobility, and social isolation. For individuals with health conditions, such as malnutrition, peripheral vascular disease, and/or compromised immunity, a skin tear can develop into a chronic, non-healing wound that leads to increased health care expenditures.1 The International Skin Tear Advisory Panel (ISTAP) and previous studies have documented that pressure ulcers and skin tears share many common risk factors. Recent publications have also highlighted the clinical challenges of differentiating skin tears from pressure ulcers, as well as the importance of correctly diagnosing each as a distinct wound type.2 In addition, there have been recent changes to the pressure ulcer staging system, removing friction as a descriptor for pressure ulcer development. Conversely, friction is one of the many risk factors for skin tears. This article will explore, using case studies, the clinical challenges of differentiating skin tears from pressure ulcers.

Method
Three case studies were used to review the relationship between pressure ulcers and skin tears using demographic factors, co-morbidities, predisposing factors, cause of wound, description of the evolution of the wound, and other variables.

Results
These cases highlight the challenges of differentiating between skin tears and pressure ulcers. In all three cases, skin tears were misdiagnosed as pressure ulcers, and these misdiagnoses resulted in delayed implementation of skin tear prevention strategies.

Conclusion
Skin tears and pressure ulcers share certain risk factors and clinical characteristics. Identifying and classifying these wounds as distinct, separate wound types can pose a clinical challenge to health care professionals. The National Pressure Ulcer Advisory Panel (NPUAP), European Pressure Ulcer Advisory Panel (EPUAP), Pan Pacific Pressure Injury Alliance (PPPIA), and ISTAP, maintain that despite the similarities in wound appearances and challenges in diagnosis, it is critical that pressure ulcers and skin tears are properly diagnosed. By differentiating these wounds, the most effective prevention and wound management strategies can be implemented.1,3

INTRODUCTION:
The skin, which is the largest organ in the body, is a vital organ that is critical for the maintenance of health and well-being. Although there are many different aetiological factors that can compromise skin integrity, it is accepted that any disruption in skin integrity can potentially lead to infection, persistent pain, immobility, mental anguish, and may have a negative impact on quality of life.4,5 With growing concerns for patient safety, quality of care, and health care resources, there is a need to reduce the incidence of skin breakdown and implement early treatment strategies to prevent progression of superficial skin damage to deep tissue traumas within a cost-effectiveness framework.6

Skin tears and pressure ulcers represent the most common wounds affecting older individuals, and these constitute a significant disease burden to healthcare systems.2,7,8 In nursing, both wound
aetiologies are considered as nursing-sensitive outcome measures and bench markers for quality of care. It has been hypothesised, and recent literature reports, that these wound types appear to share many common risk factors. However, their clinical presentation and wound healing expectations may be markedly different. In the recently updated International Pressure Ulcer Guidelines, the need to differentiate between pressure ulcers and skin tears has been highlighted. In order to optimise the prevention and treatment of skin tears and pressure ulcers, one must be able to accurately differentiate and diagnose these wounds according to their aetiology and clinical presentation. This will allow for the implementation of interventions that target each specific wound type. The purpose of this article, through case study format, is to highlight the challenges of differentiating between these two wound types and to initiate a global discussion on how a bundled approach to care can be used for the prevention and management of these wounds.

**DIFFERENTIATING SKIN TEARS FROM PRESSURE ULCERS**

It has been reported that skin tears, deep tissue injuries, and stage two pressure ulcers often mimic one another, and misdiagnoses may occur. This can result in inappropriate and/or poorly timed prevention strategies, potentially resulting in re-injury. What is known is that all of these skin injuries have the potential, if pressure is present, to evolve into painful, and costly, full thickness tissue ulceration.

**SKIN TEARS**

A skin tear is defined as “a traumatic wound occurring principally on the extremities of older adults, as a result of friction alone or shearing and friction forces which separate the epidermis from the dermis (partial thickness wound) or which separates both the epidermis and the dermis from the underlying structures (full thickness wound).” Without appropriate management, skin tears have a high likelihood of evolving into chronic wounds.

<table>
<thead>
<tr>
<th>ISTAP Skin Tear Classification System</th>
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<tr>
<td><strong>Type 1: No Skin Loss</strong></td>
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<td>Figure 1a, 1b</td>
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<td>Linear flap tear, which can be repositioned to cover the wound bed</td>
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**Figure 1**

**ISTAP Skin Tear Classification System**

<table>
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<tr>
<th>Type 1: No Skin Loss</th>
<th>Type 2: Partial Flap Loss</th>
<th>Type 3: Total Flap Loss</th>
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<td>Figure 1a, 1b</td>
<td>Figure 1c</td>
<td>Figure 1d</td>
</tr>
<tr>
<td>Linear flap tear, which can be repositioned to cover the wound bed</td>
<td>Partial flap loss, which cannot be repositioned to cover wound bed</td>
<td>Total flap loss, exposing the entire wound bed</td>
</tr>
</tbody>
</table>
imposing a significant health burden both to individuals and the healthcare system. According to existing literature, intrinsic and extrinsic risk factors for skin tears may include falls, poor nutrition, impaired mobility, cognitive impairment, and dry, fragile skin. These wounds are commonly observed in the extremes of age and in the critically or chronically ill. Although often under-reported, they are hypothesised to be highly prevalent and particularly troublesome for the elderly population.

Individuals suffering from skin tears report increased pain and compromised quality of life. In addition, because the populations at the highest risk for skin tears often include those at extremes of age and the critically or chronically ill, these individuals are at a higher risk for developing secondary wound infections and for having co-morbidities, which can contribute to skin tears evolving from acute to chronic, complex wounds. The consequences of skin tears are often underestimated, and misclassification can impede the implementation of appropriate interventions and further preventative strategies.

ISTAP SKIN TEAR CLASSIFICATION
The International Skin Tear Advisory Panel (ISTAP) developed and validated the ISTAP Skin Tear Classification system, with the goals of raising the global healthcare community’s awareness of skin tears and simplifying the identification and classification of these wounds. It is envisioned that the acceptance and utilisation of a common language and classification system for skin tears will facilitate best practices and research in this area. Skin tears are classified as type 1 (no tissue loss), type 2 (partial tissue loss), and type 3 (complete tissue loss).

PRESSURE ULCERS
The NPUAP, EPUAP, and PPPIA define a pressure ulcer as a localised injury to the skin and/or underlying tissue, usually over a bony prominence, resulting either from pressure alone or in combination with shear. A number of contributing or confounding factors are also associated with pressure ulcers; however, the significance of these factors has yet to be elucidated. The PPPIA modified the definition of a pressure ulcer in 2014, to state, “Some of these factors include mobility limitations, perfusion and oxygenation, poor nutritional status, and increased skin moisture.” An international standardised classification system is used to describe and categorise pressure ulcers according to the type of visible tissue damage that is present. In this system, pressure ulcers are assigned a stage or category once the wound being assessed is diagnosed or determined aetiologically to be a pressure ulcer. Critically, this classification system was not designed for use in any other wound type. Assignment of a pressure ulcer stage is based on visual inspection to determine level of tissue involvement and wound depth, and staging requires an understanding of the anatomy of the skin and underlying tissues.

Pressure ulcers most commonly occur over areas of bony prominence. When they form elsewhere on the body, an external source of frequent, constant pressure must be present. This external pressure source may be the patient’s own limb, as in the case of contractures or orthopaedic abnormalities. At other times, the external pressure may come from the patient’s environment, such as broken or ill-fitting wheelchair parts, bed frames, or chairs. Tight or ill-fitting clothing, shoes, bra straps, and orthopaedic splints can also be sources of external pressure. An ulcer appearing on a body part that does not have a source of frequent, constant pressure is probably not a pressure ulcer, but rather, is a condition with another aetiology, such as a skin tear. Deep tissue injury pressure ulcers are often misdiagnosed as superficial skin injuries, such as skin tears, incontinence-associated dermatitis, or stage II pressure ulcers. A Suspected Deep Tissue Injury (SDTI) pressure ulcer can initially appear as a purplish or maroon-coloured area of intact skin or even as a blood-filled blister. The purplish and/or maroon colour can also be apparent in a skin tear, but the differentiating factor would be that the skin tear would not have intact skin and the discolouration would be found beneath the tear. Critically, the evolution of an SDTI can involve a thin blister, which eventually may peel, leading some clinicians who see it for the first time to question if it is actually a skin tear. Again, this highlights the point that the aetiology and evolution of the lesion provide important discriminating factors for the clinician’s diagnosis.

INTERNATIONAL NPUAP/EPUAP PRESSURE ULCER CLASSIFICATION SYSTEM

Category/Stage I: Nonblanchable Erythema. Intact skin with non-blanchable redness of a localised area, usually over a bony prominence. Darkly pigmented skin may not have visible blanching; its colour may differ from the surrounding area. The area may be painful, firm, soft, or warmer or cooler, as compared to adjacent tissue. Category/Stage I may be difficult to detect in individuals with dark skin tones. May indicate “at risk” individuals (a heralding sign of risk).

Category/Stage II: Partial Thickness Skin Loss. Partial thickness loss of dermis, presenting as a shallow open ulcer with a red-pink wound bed, without slough. May also appear as an intact or open/ruptured serum-filled blister. Presents as a shiny or dry shallow ulcer without slough or bruising (bruising indicates SDTI). This Category/Stage should not be used to describe skin tears, tape burns, perineal dermatitis, maceration, or excoriation.
Category/Stage III: Full Thickness Skin Loss. Subcutaneous fat may be visible, but bone, tendon, and muscle are not exposed. Slough may be present but does not obscure the depth of tissue loss. May include undermining and tunnelling. The depth of a Category/Stage III pressure ulcer varies by anatomical location. The bridge of the nose, ear, occiput, and malleolus do not have subcutaneous tissue, and Category/Stage III ulcers in these locations can be shallow. In contrast, areas of significant adiposity can develop extremely deep Category/Stage III pressure ulcers. Bone/tendon is not visible or directly palpable. (Figure 4)

Category/Stage IV: Full Thickness Tissue Loss. Full thickness tissue loss with exposed bone, tendon, or muscle. Slough or eschar may be present on some parts of the wound bed. Often includes undermining and tunnelling. The depth of a Category/Stage IV pressure ulcer varies by anatomical location. The bridge of the nose, ear, occiput, and malleolus do not have subcutaneous tissue, and ulcers here can be shallow. Category/Stage IV ulcers can extend into muscle and/or supporting structures (e.g., fascia, tendon, or joint capsule) making osteomyelitis possible. Exposed bone/tendon is visible or directly palpable. (Figure 5)

Unstageable: Depth Unknown. Full thickness tissue loss, in which the base of the ulcer is covered by slough (yellow, tan, grey, green, or brown) and/or eschar (tan, brown, or black). Until enough slough and/or eschar is removed to expose the base of the wound, the true depth, and therefore Category/Stage, cannot be determined. Dry, adherent and intact eschar, without erythema on the heels should not be removed as this serves as “the body’s natural (biological) dressing. (Figure 6)

Suspected Deep Tissue Injury (sDTI): Depth Unknown. Purple or maroon localised area of discoloured intact skin or blood-filled blister due to damage of underlying soft tissue from pressure and/or shear. The area may be preceded by tissue that is painful, firm, mushy, boggy, or warmer or cooler, as compared to adjacent tissue. Deep tissue injury may be difficult to detect in individuals with dark skin tones. Evolution may include a thin blister over a dark wound bed. The wound may further evolve and become covered by thin eschar. Evolution may be rapid, exposing additional layers of tissue, even with optimal treatment. (Figure 7)

PREVALENCE RATES
The prevalence of pressure ulcers in North American long-term care (LTC) settings has been reported to be between 2.4–28%. A systematic review of skin tear prevalence and associated risk factors revealed occurrence rates varying between 3.9–22%. A general wound audit of four Canadian LTC facilities identified prevalence rates of 14.7% and 15.8% for skin tears and pressure ulcers, respectively, and uncovered a possible association among risk factors attributed to pressure ulcers and skin tears. What is unknown regarding that study are the numbers of pressure ulcers and
skin tears per individual, and another unknown factor is whether or not any of the skin tears led to a pressure ulcer.

While research on pressure ulcers in LTC spans over 30 years, skin tear studies are still in their infancy. Skin tears and pressure ulcers are often compared in the literature, as they frequently affect the elderly population, appear to have some associated factors in common, can result in costly and painful wounds, and create added strain on the healthcare system.7,8

Because skin tears and pressure ulcers share certain risk factors and clinical characteristics, identifying and classifying these wounds as distinct, separate wound types can pose a clinical challenge to health care professionals. The National Pressure Ulcer Advisory Panel (NPUAP), European Pressure Ulcer Advisory Panel (EPUAP), Pan Pacific Pressure Injury Alliance (PPPIA), and ISTAP maintain that despite the similarities in wound appearances and challenges in diagnosis, it is critical that pressure ulcers and skin tears must be properly diagnosed. By differentiating these wounds, the most effective prevention and wound management strategies can be implemented.1,3

The following three cases highlight the challenges of differentiating between skin tears and pressure ulcers. In all three instances, skin tears were misdiagnosed as pressure ulcers, and this resulted in delayed implementation of skin tear prevention strategies.

CASE STUDIES
Case Study 1
65-year-old female residing in LTC for greater than 2 years. Past medical history includes obesity, multiple sclerosis, wheel chair dependence, and history of multiple skin tears. Due to her obesity, the dietician follows her closely, and she is on a weight loss program that is high in protein. She developed multiple type 3 skin tears to her bilateral trochanter regions, extending to bilateral upper thighs, all secondary to unsuitable equipment for a bariatric patient. These wounds were misdiagnosed as Stage II pressure ulcers and became complex wounds secondary to anatomical location, obesity, immobility, external pressure to the area, and repeat trauma as the cause (inappropriate equipment leading to skin tears was not removed in a timely fashion). (Figure 8)

Case Study 2
75-year-old female residing in LTC for approximately 6 months. Past medical history of stroke with left side weakness, multiple sclerosis, incontinence of urine and stool, and wheel chair dependence. She had no history of previous pressure ulcers or skin tears. As a relatively new admission to the LTC facility, the dietician was following her to ensure optimal nutritional intake. She developed a type 3 skin tear over the left trochanter, secondary to ill-fitting incontinence briefs. The wound deteriorated and was subsequently misclassified as a Stage III pressure ulcer. Wound healing was delayed due to pressure, the patient’s general poor health status, and the failure to change the incontinence product for well-fitted briefs in a timely fashion. (Figure 9-10)
Case Study 3
52-year-old male with a history of brain injury and complete immobility. He had a past history of stage II pressure ulcers to his coccyx area. It was noted by the registered staff that nutritional intake was an issue and that it had not improved, despite involvement of a dietician in his care. He was treated with antibiotics for a urinary tract infection and developed diarrhoea. The skin was damaged with chemical irritation from faecal matter and mechanical irritation from frequent cleansing. Small discrete skin tears, due to frictional force from the washcloth, were noticed in the injured area, as evidenced by partial skin loss. The area continued to deteriorate within a week and acquired a dark, purplish appearance with evidence of tissue necrosis and deep tissue injury. The standard hospital mattress was replaced with a low air loss mattress, and the patient was frequently turned to provide pressure redistribution and minimise shearing forces. (Figure 11-12)

DISCUSSION
These cases highlight the challenges of differentiating between skin tears and pressure ulcers. In all three instances, skin tears were misdiagnosed as pressure ulcers, and this misdiagnosis resulted in delayed implementation of skin tear prevention strategies.

It is a clinical challenge for healthcare professionals to identify and classify skin tears when they occur in areas of the body where pressure ulcers also typically occur, such as over bony prominences. In addition, skin tears that develop over areas exposed to constant/unrelieved pressure may deteriorate rapidly and, thus, can be subsequently identified as pressure ulcers, especially as a stage II or SDTI pressure ulcer. When skin tears occur over bony prominences, added pressure can result in additional tissue damage, which may manifest as a pressure related injury; however, this association has yet to be explored.

Bundled approaches to care allow healthcare professionals to prevent and manage several potential wound aetiologies (pressure related injuries, moisture associated injuries, and skin tears) with one prevention program, which can potentially save money and time, but more importantly, also enhances patient comfort. It should be cautioned, however, that healthcare professionals must be cognizant of the fact that these programs need to be flexible to allow for specific and individualised prevention programs. The cases above illustrate that there are shared risk factors among skin tears, deep tissue injury, and stage two pressure ulcers. However, skin tears have the added component of friction and trauma that may not be present with pressure related injuries. It is imperative that skin tears be differentiated from pressure ulcers, in order to facilitate appropriate prevention strategies, such as the removal of the cause of trauma or friction.

CONCLUSION
The three cases discussed here highlight the challenges a healthcare professional may encounter when skin tears occur in areas of the body where pressure ulcers are commonly identified. The updated International Pressure Ulcer Classification System documents that skin tears should not be classified as pressure ulcers. Therefore, proper identification and classification of skin tears, and the implementation of interventions aimed at preventing these wounds from occurring, are essential. Further research is needed to identify risk factors that are associated with skin tears, in order to facilitate the correct diagnosis this wound type.

KEY TAKE AWAY POINTS:
1. The prevalence of skin tears is reported to be equal to, or greater than, that of pressures in the aging population.
2. Skin tears are acute wounds, which have a high risk of becoming chronic and more complex.
3. Clinicians must be aware of the importance of differentiating between skin tears and pressure ulcers to ensure the use of prevention and management strategies that are appropriate for the given wound aetiology.
4. There is a possible link between the risk factors associated with pressure ulcer development and those associated with skin tear development. Further research is required to establish if such a link exists and if a bundled approach to prevention and management is best practice.
REFERENCES

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Primary Care Patient Safety (PISA) Research Group - Identifying priorities for pressure ulcer prevention in primary care

BACKGROUND
Pressure ulcers are harmful and largely avoidable. They cause needless pain and suffering for patients, as well as increased morbidity, mortality and length of hospital stay. As a result, pressure ulcer prevention is a priority area for patient safety in healthcare organisations internationally. The majority of efforts have focused on improving pressure ulcer prevention and treatment in secondary care, but an opportunity exists to advance pressure ulcer prevention in primary care.

Patient safety incident reports contain free text descriptions of unsafe or poor quality care that are written by frontline healthcare professionals when any untoward event resulted in, or could have resulted in, harm to a patient. Such reports contain information, which can be used to model the sequence of events leading up to harmful outcomes, as well as the related contributory and contextual factors. In England and Wales, a National Reporting and Learning Service (NRLS) was established in 2003 as a repository to enable the generation of learning from safety incident reports.

The Primary Care Patient Safety (PISA) Research Group led by Dr Andrew Carson-Stevens at the School of Medicine, Cardiff University, aims to advance the quality and safety of primary care through identifying learning from data like patient safety incident reports to support organisations and their teams to empirically design/redesign their systems and to develop, test, implement and evaluate changes in practice. The PISA Group was formed in January 2013 with funding from the National Institute for Health Research (NIHR) in order to characterise the largest sample of patient safety incident reports from general practice worldwide. To date, the PISA group has undertaken analyses of safety incident reports describing problems in care for patients during the transfer between secondary and primary care, vaccine safety in children, vulnerable children in primary care, and safety incidents experienced by children in the general practice setting.

In collaboration with international experts from the Australian Institute for Healthcare Innovation (Hibbert and Makeham), the PISA group is examining free-text patient safety incident reports describing pressure ulcers written by frontline healthcare professionals with a view to identifying priority issues for pressure ulcer prevention in primary care and supporting the development of interventions.

METHODS
The PISA Group uses a three-stage mixed methods process to generate learning from a sample of reports received by the NRLS over a decade (2003-2013):

- **Stage 1**: Familiarisation and data coding – reading free-text and applying codes to represent the incident type, potential contributory factors, level and type of harm described in the safety incident report.

- **Stage 2**: Generation of data summaries – descriptive statistical analysis to identify the most frequent and harmful incident types.
Stage 3: Interpretation of themes and learning – thematic analysis to understand the most common safety contributory themes, and consideration of the contexts within which they occurred. Clinicians and patient safety experts review the analyses to identify key areas for improvement in pressure ulcer prevention in primary care. The method is described in more detail in a recently published study protocol.13

CONCLUSION
This study will be the first national-level (England and Wales) analysis of patient safety incident reports from primary care about pressure ulcers. It will empirically identify concepts to inform a quality improvement agenda for pressure ulcer prevention in primary care. When this study is completed in Spring 2016, its findings should be interpreted in conjunction with existing research and development efforts in the field of pressure ulcer prevention in primary care.

ACKNOWLEDGEMENTS
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REFERENCES
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4:00 – 4:15 p.m.: Dr Carsten Glockemann (Hannover-Oststadt, Germany)
“How to implement modern wound management into daily practice of a physician?”

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Challenges faced by healthcare professionals in the provision of compression hosiery to enhance compliance in the prevention of venous leg ulceration

ABSTRACT
Venous leg ulceration affects 1 in 500 people in the United Kingdom\(^1\) resulting in a detrimental effect on the patient’s quality of life. Prevalence increases with age, and venous leg ulcers have high recurrence rates.\(^1\) Compression hosiery is the mainstay of treatment and prevention, although hosiery efficacy is hindered by non-concordance.\(^2\)

AIM
To enhance the current delivery and management of compression hosiery in a local National Health Service (NHS) Trust.

METHOD
A pilot questionnaire was administered to 26 healthcare professionals to explore the current information provided to patients and to understand the professional’s knowledge about and opinions on patient compliance with compression hosiery.

RESULTS
Application difficulties and discomfort were the main reasons healthcare professionals provided for patient non-compliance. 79% of patients experienced difficulties with hosiery application. 90% of professionals provided verbal advice when prescribing hosiery, and 46% provided written information. Healthcare professionals felt that patients did not understand the importance of compression hosiery. These data suggest inconsistencies in the information provided to patients.

INTRODUCTION
Compression hosiery is the mainstay of treatment and prevention of venous leg ulceration and reduction in venous hypertension symptoms.\(^3,4\) Reference sources used in the literature search were CINAHL, Medline, Academic Search Complete, and Sciencedirect. The following search terms were used: “ulcers and recurrence,” “venous ulcer and hosiery,” “compression stockings/hosiery,” “compliance/adherence/concordance,” and “ulcers and prevention”. From the literature review, the reasons given by participants for not using compression hosiery include cost, application difficulties, discomfort, health promotion, and self-efficacy.\(^5-15\)

Difficulty with the application of compression hosiery was found to be the most common reason provided for non-compliance. The literature highlighted that ill-fitting compression hosiery is associated with the skills, training, and competence of clinicians carrying out the assessment.\(^16-18\) Compression hosiery measurement should be carried out by a healthcare professional who has knowledge of the underlying causes of venous ulceration, compression hosiery treatment, and the effect of different types of hosiery knit (flat or circular).\(^3,4,18-20\) This is imperative not only for successful, cost-effective treatment outcomes, but also and more importantly for convincing patients that the hosiery will improve and manage their symptoms and, thus, reduce the impact of leg ulcers on their quality of life.\(^3,4,17,20\)

The therapeutic relationship between the nurse and the patient and the role that relationship plays in leg ulcer aftercare is rarely discussed in the literature, although its significance to health promotion appears to be underestimated. Nurses are at the forefront of leg ulcer management, and the standard of care they provide plays a significant role in influencing a patient’s concordance.
Therefore, an effective nurse-patient relationship is imperative to achieve successful treatment outcomes through the adoption of a holistic assessment, recognising that the patient is an expert in his/her own condition. Solutions to issues experienced by patients and healthcare professionals are highlighted in the literature; these include a staged introduction to compression hosiery, effective use of compression hosiery application aids, and consistent health promotion using verbal and written information, such as lifestyle advice that incorporates the facilitation of self-efficacy improvement techniques. These solutions aim to facilitate patient concordance with compression hosiery and leg ulcer aftercare. Ultimately, this could result in improvements in quality-of-life outcomes and a reduction in the financial burden faced by the National Health Service.

METHODS
A self-report questionnaire was distributed to a purposive sample of 26 registered healthcare professionals who are members of a County Tissue Viability Team. The aim of the questionnaire was to determine whether respondents considered non-compliance to be an issue in treatment with compression hosiery. In addition, questions were included to discover what information is commonly provided to patients when they are prescribed hosiery. Respondents were asked to identify the reasons they thought caused non-compliance and what they felt could be done to address compliance.

Ethical approval was sought from the local Trust, the study was deemed a service evaluation, and permission for the study was granted.

RESULTS
As shown in Figure 1, the majority of respondents were community nurses. As shown in Figure 2, 62% of respondents completed an accredited leg ulcer management course. Figure 3 highlights that 4% of respondents provided no advice, 46% provided a compression hosiery advice leaflet, and 60% provided a skin care leaflet. The respondents considered non-concordance as an issue in 25-50% of patients. Figure 4 signifies that 96% of respondents considered patients to be non-concordant with compression hosiery due to application difficulties.

Following the recommendation/prescription for treatment with compression hosiery, 72% of respondents were contacted by patients with concerns about their treatment. When respondents were asked whether they thought patients understood the importance of compression hosiery, opinion was split at 50%. However, 72% of respondents believed patients did not take sufficient responsibility for their own compression hosiery application and care.

DISCUSSION
Sixty percent of respondents thought patients were supplied with sufficient information when prescribed compression hosiery, information which consisted of verbal advice in 90% of responses. Similar findings were highlighted in the literature; clinicians, therefore, may not be providing adequate information and support. 48% of respondents thought better information on compression therapy would
FIGURE 3
ADVICE GIVEN TO PATIENTS WHEN PRESCRIBED COMPRESSION HOISERY

NONE
COMPRESSION THERAPY
VERBAL ADVICE
SKIN CARE LEAFLET

FIGURE 4
MAIN REASONS THAT RESPONDENTS THOUGHT PATIENTS WERE NON-CONCORDANT WITH COMPRESSION HOISERY

NONE
APPLICATION DIFFICULTIES
POOR PATIENT INFORMATION REGARDING HOISERY APPLICATION
POOR PATIENT INFORMATION, RE: SKIN CARE
POOR FIT
DISCOMFORT

FIGURE 5
WHAT RESPONDENTS CONSIDERED COULD BE DONE TO IMPROVE COMPLIANCE

BETTER INFORMATION ON COMPRESSION HOISERY
BETTER INFORMATION ON SKIN CARE
HOISERY FITTING SERVICE
GREATER CHOICE OF PRESCRIBABLE HOISERY
NON-PAYMENT FOR HOISERY ON FP10
MORE APPLICATION AIDS ON FP10
improve compliance. The literature recognises that non-compliance with treatment is positively associated with the patient’s lack of knowledge and understanding of his/her condition and the role of treatment with compression hosiery. The healthcare professional is responsible for ensuring that patients are supplied with sufficient information in an appropriate format to enable the patient to make an informed decision on whether to comply with treatment.

Consistent with findings in the literature, responses to the questionnaire in this study revealed that application difficulties were the single most common reason for non-compliance with compression hosiery. Although the use of application aids is recommended and a selection is available on FP10 prescription, their usage has not been established. 64% respondents felt that a wider variety would enhance compliance. Such a service might be difficult to deliver and would be means-tested to determine whether an individual may be eligible for government assistance based upon whether the individual has the means to fund this without assistance. This is due to the £20bn efficiency savings needed by the NHS, as highlighted by the NHS Improvement Service.

Poor application technique or inaccurate sizing of compression hosiery is related to low use by patients. Similarly, 77% of respondents reported discomfort and 19% reported poor fit as reasons for patients’ non-compliance with compression hosiery. The accurate measurement and selection of the appropriate type of compression hosiery with regard to flat or circular knit garments are key to ensure that a patient’s comfort is promoted at all times.

The majority of respondents in this study, 62%, had taken an accredited leg ulcer course. The Medical Education Partnership (2006) maintains that health professionals involved in the provision of compression hosiery should be competent to do so. The knowledge, skill, and experience of the registered nurse in providing leg ulcer care and aftercare is paramount and is positively related to the quality of care provided and success of preventative treatment. Reasons for the gap in the knowledge and skill of the registered nurse have been highlighted by respondents to be attributable to a number of reasons, including funding to complete training and motivation to develop the required skills. Nurses are accountable for their practice and, therefore, need to ensure that they not only are competent to provide the care needed, but also work towards a patient-centred approach that delivers evidence-based outcomes.

Patients should be encouraged to take control of their health by playing an active role in their treatment through the utilisation of the nurse-patient therapeutic relationship, which is based upon trust, empathy, and empowerment.

73% of respondents in this study felt that patients did not take sufficient responsibility for their own application of hosiery and care; therefore, consideration must be given as to what can facilitate this in practice.

**CONCLUSION**

Twenty-six healthcare professionals who are members of a County Tissue Viability Team took part in a small-scale survey providing a representative sample. The questionnaire explored the challenges faced by healthcare professionals and patients in enhancing compliance with the use of compression hosiery. The main findings concur with the literature: application difficulties and discomfort are the most common reasons for patient non-compliance with compression hosiery.

The knowledge and skill of the registered nurse is related to the quality and success of treatment provided. To improve patient concordance, nurses need to be supported in their pursuit of training to develop their knowledge and skills in this area. Additionally, healthcare professionals must ensure that the selection process by which hosiery is prescribed is holistic and engages patients in a therapeutic nurse-patient relationship to empower patients to have an active part in their care.

**IMPLICATIONS FOR PRACTICE**

*It is vital that the assessment, measurement, and selection process by which hosiery is prescribed is holistic, ensuring that patients are involved and play an active part in their care to promote compliance.*

**FUTURE RESEARCH**

*Future research is required to understand the frequency of the use of application aids, patient’s perceived consistency of health promotion advice, and the role of self-efficacy in the prevention of venous leg ulcer recurrence.*
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INTRODUCTION
Many service commissioners are demanding a reduction in pressure ulcer prevalence and regard pressure ulceration as a key indicator of care quality. Within our area of practice, local commissioners have indicated that all health care providers in the district should work together to reduce pressure ulceration across the local health care economy. Health care professionals clearly have a critical role to play in patient assessment, risk categorisation, care planning and equipment provision. However, this alone will not be sufficient to achieve the reduction targets which will involve effective patient engagement.

National and International guidelines all recognise the importance of patient education in care and recognise the significance of patient involvement in personalised care planning and service provision. Hartigan et al have demonstrated the value of education leaflets in supporting pressure ulcer prevention in an elderly population. Patient support applications running on mobile phones and tablets are also available to assist in pressure ulcer prevention and patient education but are not widely used in a hospital setting. This study examines how effective standard verbal and written information is at delivering patient education for pressure ulcer prevention.

Local hospital policy is that all patients identified as being at risk of developing pressure ulceration are provided with information on what a pressure ulcer is, what constitutes risk and how to assist staff in pressure ulcer prevention. The policy includes patient and carer involvement in care planning, and encouragement to report skin changes and pain to staff.

METHOD
Hospital policy is that patients are provided with both printed information based on the criteria in National Institute for Clinical Excellence (NICE) guidance and European Pressure Ulcer Advisory Panel (EPUAP) documents and reinforced by verbal discussion in relation to pressure ulcer prevention. To audit the effectiveness of the current information provided by ward staff to “high risk” patients, a questionnaire was designed by the Wound Healing Unit (WHU) to allow both assessment of the current “education” and to provide WHU staff with the opportunity to give patients further information when deficiencies in their knowledge or understanding relating to pressure ulcer prevention were identified.

Fifty patients, from both medical and surgical wards, at high risk of pressure ulceration were identified. Following consent, patients were approached and questioned by the WHU staff. A proportion of patients (1 in 5) were randomly selected (9) to undergo a further assessment by WHU staff using the same questionnaire. The second assessment occurred on the following day and was designed to assess their retention and understanding of any additional information provided during the first questionnaire session.

RESULTS
Following provision of information by the ward staff, 38 of 50 patients knew what a pressure ulcer was. 6 patients thought that moisture lesions and bedsores were the same thing. 26 patients recognised that pressure ulcers could occur at several body sites including the sacrum and heel, 20 felt
that pressure ulcers only occurred on the sacrum and 4 were unsure where they occurred.

When asked how staff recognised that they were at risk of pressure ulceration, only 3 knew that staff had a risk assessment sheet, 26 did not know and 15 said they knew these things because they were nurses. The remaining 7 felt that everyone in hospital may get a “bed sore”.

33 patients recognised that they were having regular skin assessment and knew why, in addition 9 patients knew to report skin soreness. The remainder did not equate skin assessment with pressure ulcer prevention. 29 patients were aware that the nurses had told them that they were at risk of developing a pressure ulcer, 10 patients expressed concern about developing a bedsore. 38 patients recognised that poor mobility was a risk factor and understood the need for repositioning. 7 patients understood that poor nutrition contributed to risk. 9 patients did not know about factors that increased risk.

Despite all patients being on a profiling bed and a minimum of a high density foam mattress, 16 felt that they were not provided with pressure relieving equipment, 4 of these were actually on an alternating pressure mattress.

Re-questioning of the sub-group of 9 patients after further information provision by the WHU staff during the initial questionnaire session showed an improvement in understanding, but one patient still lacked understanding and two did not know that pressure ulcers could occur anywhere on the body.

**DISCUSSION**

Patients’ understanding of the information provided in relation to pressure ulcer prevention may not be as complete as we assume. Even after specialist staff provided additional information, some patients still do not understand why and how pressure ulcers occur. Patient engagement in pressure ulcer prevention is a key component in the overall prevention strategy, and a lack of patient and family understanding often contributes to complaints and litigation.

**CONCLUSION**

This small survey indicates that we should all revisit this aspect of care and work to raise public awareness of their role in pressure ulceration prevention.

**REFERENCES**

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The perforated, soft silicone adhesive wound contact layer ensures a gentle fixation to wound and body, for a comfortable and secure fit with minimal pain upon removal of dressing.³,⁵,⁶

References:
1. Data on file, 2012
2. Data on file, 2013
INTRODUCTION
Epidermolysis Bullosa (EB) is the generic term for a large complex group of inherited blistering and skin fragility disorders. There are 4 main types of EB and many additional subtypes. The common factor is fragility of the skin and mucous membranes with a tendency for blisters and wounds to develop following minimal everyday friction and trauma. Fragility results from reduced or absent vital proteins, which give the skin its tensile strength. EB can be inherited either dominantly or recessively, with the recessive types generally being more severe.

The 4 main types of EB are EB simplex; junctional EB; dystrophic EB and Kindler syndrome. Whilst experienced clinicians may be able to make a provisional diagnosis, this is difficult in the presentation of affected new-borns and diagnosis must be made from analysis of a skin biopsy using the key diagnostic tools of positive immunofluorescence, antigen mapping and electron microscopy. Re-categorisation in 2014 removed many of the eponyms and included more variants.1

The severity of the condition varies between painful blistering of the hands and feet in EB simplex localised, to death in early infancy resulting from laryngeal disease and faltering growth in those with generalised severe junctional EB. Scarring in those with severe forms of dystrophic EB leads to development of contractures, microstomia, oesophageal strictures and pseudosyndactyly.2

PRINCIPLES OF WOUND CARE
Wound healing is compromised by the underlying genetic defect, poor nutritional status, anaemia (both resulting from chronic disease and iron deficiency), pain and pruritus. The general guidance of selection of the correct dressing, protecting the peri-wound skin, avoiding skin stripping, lancing blisters to limit their spread, addressing the bio-burden and exudate management apply. In addition, the type of EB further dictates skin and wound care. Whilst this article will briefly describe these categories and recommendations, more detailed information is available in Best Practice Guidelines for Skin and Wound Care in Epidermolysis Bullosa.3

Although there is a plethora of wound care products available, the selection suitable for those with fragile skin is more limited. Adhesive dressings and even those coated with soft silicone may result in skin stripping in the most fragile patients. Using a Silicone Medical Adhesive Remover (SMAR) can eliminate this risk. SMARs are also essential in removing adhesive products such as fixation for cannulas and essential monitoring devices.4

Due to the increase in antibiotic resistant organisms, oral or intravenous antibiotics are reserved for systemic infection with a preference to use topical antimicrobial therapies as first line treatment.5

NUTRITIONAL SUPPORT
Oral blistering and dysphagia compromise intake in severe forms of EB. Long term enteral feeding is often necessary to increase nutritional requirements and aid wound healing.6

CARE OF THE NEWBORN WITH SEVERE EB
Severely affected infants often present with widespread skin loss resulting from inter-uterine movements and compounded by the trauma of delivery. In addition to complex wound management, all screening and handling procedures require modification to reduce additional damage to the fragile skin and mucosa.7
Skin stripping following removal of adhesive tape

Birth damage in a severely affected new born infant

**Figure 1: Foot and lower leg dressing template**

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remove cord clamp and replace with a ligature</td>
<td>To protect peri-umbilical skin</td>
</tr>
<tr>
<td>Nurse in cot/bassinette unless incubator required for reasons such as prematurity</td>
<td>Heat and humidity may exacerbate blistering</td>
</tr>
<tr>
<td>Give regular analgesia and additional pre-procedure doses using a validated neonatal pain score for adjustment</td>
<td>To provide adequate pain relief</td>
</tr>
<tr>
<td>Lance all blisters with a hypodermic needle</td>
<td>Blisters are not self-limited and left unchecked will spread, resulting in pain and further tissue damage</td>
</tr>
<tr>
<td>Leave the blister roof in situ</td>
<td>The roof will act as a protective dressing and reduce pain and tissue damage</td>
</tr>
<tr>
<td>Cover open wounds with a non-adherent absorbent foam dressing e.g. polymeric membrane</td>
<td>To provide an optimal wound healing environment, continual cleansing of the wound and management of exudate To reduce duration of dressing changes</td>
</tr>
<tr>
<td>Use a template to pre-cut dressing shapes. Cover entire limb, overlap dressing and secure by taping to itself</td>
<td>To avoid skin stripping from adhesive tapes and to protect undamaged skin from normal baby movements</td>
</tr>
<tr>
<td>Dress digits individually</td>
<td>To avoid early pseudosyndactyl</td>
</tr>
<tr>
<td>Cleanse napkin area with 50% liquid paraffin, 50% white soft paraffin in ointment or aerosol form</td>
<td>Water may cause stinging to open wounds and blister sites</td>
</tr>
<tr>
<td>Line napkin with soft material such as commercial liner</td>
<td>To reduce trauma from the edges of the napkin</td>
</tr>
<tr>
<td>Protect intact skin with a barrier product</td>
<td>To promote skin integrity</td>
</tr>
<tr>
<td>Cover wounds and blister sites with hydrogel impregnated gauze dressings</td>
<td>To provide a moist wound environment and protect from faecal contamination</td>
</tr>
<tr>
<td>Nurse on neonatal mattress</td>
<td>To protect skin, offer comfort and for ease of handling</td>
</tr>
<tr>
<td>Avoid bathing until inter-uterine and birth damage have healed</td>
<td>To avoid further trauma from handling</td>
</tr>
<tr>
<td>Dress in front fastening baby suit</td>
<td>For ease of handling and for added protection from normal baby movements</td>
</tr>
<tr>
<td>Always use a Silicone Medical Adhesive Remover to safely take off adherent dressings, adhesive tapes or adherent clothing</td>
<td>To avoid skin stripping</td>
</tr>
</tbody>
</table>
WOUND MANAGEMENT SPECIFIC TO THE TYPE OF EB

EB SIMPLEX (EBS)
Most forms of EBS are dominantly inherited and result from a disorder of keratin proteins, which provide scaffolding for basal epidermal cells. Defects of keratin result in blisters forming following minimal friction and trauma. With the exception of neonates with generalised severe EBS who are frequently born with extensive wounds, the localised and generalised types of EB simplex are characterised by blistering caused by friction. EB simplex is affected by heat and humidity, with blistering being much worse in the summer months.

Management of EBS is by lancing blisters, reducing friction and use of measures to keep cool such as using socks containing silver thread, cooling insoles and shoes offering ventilation. Suitable dressings offer comfort, reduce heat and promote healing of blister sites. Appropriate dressings include sheet hydrogels, bi-stretch silicone dressings and bordered soft silicone dressings. However, many affected individuals prefer not to use any dressings at all.

Care must be taken to ensure blistering does not result from trauma caused by the edges of dressings. This can be minimised by rounding off the dressings and padding beneath the edges with dressings such as lipidocolloid or hydrofiber.

JUNCTIONAL EB (JEB)
JEB is a recessively inherited condition. Blistering occurs within the lamina lucida. Mechanical integrity of the hemi-desmosomes or anchoring fibrils is compromised by gene mutations.

In its most severe form, generalised severe junctional EB infants rarely survive beyond the first two years of life. Less severe forms of junctional EB (JEB Intermediate) predispose to the development of chronic wounds, alopecia and with an increased risk of squamous cell carcinoma in mid life.

Over-granulation tissue features in wounds of all types of severe EB, but it is most common in those with junctional EB. Measures to deter this florid tissue include selecting a primary dressing with a very fine mesh such as a lipidocolloid, or using hydrogel impregnated gauze dressings. Hypergranulation is most troublesome on the face of longer-term survivors, causing chronic wounding, pain and disfigurement. Treatment with a very potent topical steroid in combination with an antimicrobial agent destroys the over-granulation tissue and encourages healing to take place.

DYSTROPHIC EB (DEB)
Dystrophic EB can be inherited either dominantly or recessively. In DEB, collagen VII is reduced and, in severe recessive forms, completely absent.

Collagen VII forms the basis of anchoring fibrils, which attach the epidermis to the dermis leading to formation of traumatic wounds following minimal shearing forces. Those with markedly reduced or absent collagen VII heal with atrophic scarring leading to development of progressively disabling contractures.

Wound management in dystrophic EB is complex, with a need to protect from trauma, manage the bio-burden and...
exudate, and attempt to delay formation of contractures and pseudosyndactyly.

There is a high risk of development of aggressive forms of squamous cell carcinoma in young adults with severe dystrophic EB.11 Patients and carers need to be made aware of the signs and encouraged to report any change in appearance of a chronic wound, an abnormal sensation or increase in pain or exuberant tissue growth within an existing wound.

Suitable dressings in the management of dystrophic EB are plentiful and can be selected according to need, such as exudate management, critical colonisation, infection, odour or protection. Recommended dressings include soft silicone, lipidocolloid, foams, honeys, enzymatic gels and super-absorbers.

**KINDLER SYNDROME**

Kindler syndrome is recessively inherited and results from mutations in the gene FERMT1.12 This is a rare type of EB, which is difficult to diagnose as it may demonstrate features of other types of EB due to the unique feature of variable level of cleavage with blister formation occurring within the epidermis, lamina lucida or sub lamina densa.

Neonatal skin loss and blisters are common but reduce during infancy. Later changes include photosensitivity requiring sun protection, atrophic and pigmentary skin changes.

Dressing selection is indicated by level of blister formation with epidermal blistering following recommendation for those with EB simplex and sub lamina densa that of dystrophic EB.

**CHRONIC WOUNDS**

Those with severe forms of EB are predisposed to the development of chronic wounds. Common causes include infection and critical levels of colonisation, poorly controlled exudate, presence of slough and necrotic material and destruction from scratching to relieve the discomfort resulting from pruritus.

Management of these wounds is complex, and due to the underlying gene defect and multiple co-morbidities, not always successful.13 Appropriate management of exudate is crucial if attempts are to be made to protect the peri-wound skin from maceration.

Bathing may be difficult for individuals who have multiple wounds and contractures due to pain, risk of damage from handling and duration of a full dressing change.14 In the absence of bathing, wound cleansing with an antiseptic agent is encouraged as is removal of slough and dried exudate using debridement cloths and pads. Medical grade honey preparations, hydrogels, enzymatic and larval debridement have also been successfully employed.

Advanced therapies for management of chronic wounds using bioengineered skin grafts, protease modulators, collagen and keratin dressings should be considered if regular recommended dressings are unsuccessful.

**INFECTED WOUNDS**

Infected wounds should be managed using topical antimicrobial products unless the patient is systemically unwell. Recommended products include medical grade honey, enzyme alginogel, polymeric membrane, polyhexamethylene biguanide and silver dressings. Silver products should be used with caution in infants under one year. When used in large areas there is a potential risk of raised plasma silver levels, so restrict usage to 14 days.

**MANAGEMENT OF FUNGATING WOUNDS**

Patients with severe forms of EB, in particular those with generalised severe dystrophic EB, have a very high risk of developing squamous cell carcinoma. Towards the end of life these may result in an inoperable tumour, which develops into a fungating wound. Careful management to address pain, exudate, bleeding and odour may require multiple layers of dressings. Dressing changes should be kept to a minimum in order to reduce the risk of bleeding and additional pain.15

**PRURITUS**

Pruritus is a challenge for affected individuals, carers and health professionals. Scratching leads to extensive skin damage and wounding. Additionally intense pruritus forms part of the pain spectrum and can result in depression and insomnia.16 Management of pruritus is by simple measures such as applying emollients or products containing menthol to cool the skin, avoiding warm environments if possible or using air conditioning or non–buffeting fans to circulate the air.

Loose cotton clothing or specialised silk garments have anti-pruritic properties and can be helpful.

**MANAGEMENT OF PAIN**

Pain in severe EB is multi-factorial and requires input from a specialised pain team with an age-appropriate validated pain tool used at each dressing change in order to achieve optimal pain management.

Management of wound pain must consider the presence of both nociceptive and neuropathic pain and may require regular and procedural opioid treatment together with agents such as gabapentin and pregabalin. Topical agents including morphine gels and dressings containing ibuprofen are helpful for individual painful wounds.
REFERENCES


Non-pharmacological treatments such as guided imagery and psychotherapy are used in conjunction with pharmacological treatments.17

CONCLUSION
Wound management in EB is complex as it is influenced by multiple co morbidities and the fragility of the skin. Dressing management is specific to the type of EB, presence of infection or critical colonisation, levels of exudate, availability of products and personal preference. Families with a long history of EB, such as those with EB simplex localised, may shun modern technologies and prefer to use less suitable products as dictated by family members, which is frustrating for the professional attempting to help.

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Skin aging: a global health challenge

INTRODUCTION

Aging is a universal concern. Linked to aging are a series of physiological and pathological processes, among them changes in skin turnover, quality, and regenerative potential. Skin aging has long been viewed as more of an aesthetic problem than as a real functional health problem.

Nowadays, more people are reaching “old” age, resulting in an increase in both the proportion of the population that is of advanced age and in absolute global number of persons of advanced age. Skin aging must be thought of as a health issue that should be integrated into the global aging field, in which we know that each organ insufficiency can add to another and produce those difficult to treat co-morbid states well known by the geriatrician. Therefore, we must adopt a broader view of aging skin health than just concern over the skin or wound itself.

World demographics show us that, in all countries, the proportions and absolute numbers of those aged 65 and over and, among them, those aged 85 and over are steadily growing. Skin aging, which has been characterised previously as an aesthetic phenomenon, is now clearly identified as an organ insufficiency to be considered parallel to renal or heart insufficiency, for example.

CONTRIBUTING FACTORS

Skin aging is the result of both intrinsic and extrinsic factors. Intrinsic factors are those that are genetically determined, lead to what some call chronologic aging, and include sex hormones levels and inner oxidative stress. Among other outcomes, fine wrinkles, skin thinning, laxity, and loss of elasticity are caused by chronologic aging.

Extrinsic factors are all factors that, from the outside, enhance intrinsic skin aging and lead to profound wrinkles, pigmenary defect, and skin cancers. Photoaging, linked to sun exposure, is considered a major contributor to overall skin aging. Grossly, ultraviolet A radiation is responsible for skin aging and ultraviolet B radiation for skin cancers, which increase in incidence with age. Medications such as corticosteroids, immunosuppressants, and chemotherapeutic agents directly impact the skin. Other factors, such as tobacco, alcohol consumption, and air pollutants, certainly play important roles as well.

Intrinsic factors can play a role in the extrinsic skin aging pathway; for example, skin pigmentation, which is genetically determined, plays a major role in the phototoxicity of sunrays. As a result, less pigmented skin exposed to sun will become thinner and weaker and have a lessened defensive role and capacity to rejuvenate than more pigmented skin that is similarly exposed to sun.

Extrinsic and intrinsic factors lead to skin weakness that translates into skin tears, deep dissecting hematomas, and wound-healing difficulties, which in turn can lead to lengthened hospital stays.

However, we should adopt a broader view on the global aging process and look at its consequences on other functions that can have direct or indirect

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Conflicts of interest: None
effects on skin health. Among these aging consequences are sensitivity losses which will place the skin at risk from undetected injuries, other neurological deficits resulting in falls in which the skin tears and/or bleeds easily, and renal insufficiency or malnutrition, which are common in the elderly and result in further insults to the skin. With age, the number of diagnoses that can negatively impact skin integrity and/or repair capacity increases. These diagnoses include diabetes, conditions requiring anticoagulants, edema from cardiac insufficiency, peripheral arterial disease, and chronic venous insufficiency.

PREVENTIVE MEASURES
Protection of the skin is very important, and simple measures such as skin washing and systematic daily use of emollients have proven effective.15 However expensive, some retinoid based creams with hyaluronic acid have also proven effective.6

Skin protection efforts can extend beyond the skin itself. Such efforts may include establishing a safe environment to reduce falls and impacts and padding of limbs and potentially dangerous everyday objects, such as a wheel chair.

Skin protection efforts can also involve carefully applying treatments of non-age-related skin problems in patients of advanced age. For example, in the case of perineal dermatitis, treatment must be rapidly applied following strict protocols.16

Special attention must be paid to smokers. Tobacco has both long-term and short-term effects on skin health. Quitting cigarettes proves very useful for wound healing and reducing postoperative problems, such as suture dehiscence and infection.17, 18

WOUND TREATMENT
In aged skin, all stages of wound healing may be impaired, including
- Inflammation, with early increase in neutrophils, delayed monocyte infiltration, impaired macrophage function (reduced phagocytic capacity), increased secretion of proinflammatory mediators, and decreased vascular-endothelial-growth-factor production.
- Proliferation, with reduced response to hypoxia, delayed angiogenesis, and delayed collagen deposition with reduced fibroblast proliferation and migration. Delayed re-epithelialisation and reduced keratinocytes proliferation and migration will occur.

- Remodelling, with reduced collagen turnover, resulting in increased fibroblast senescence. This decreased activity usually leads to visually accelerated maturation and less visible scars.19

For this reason, special attention must be paid to wound care in the aging population. If wounds or skin tears appear, state-of-the-art treatments must be applied timely to optimise healing without further damage to the skin. Low adherence, moisture-maintaining dressings play an important role in this treatment.20, 21 For both prevention and treatment, an interdisciplinary approach will be crucial.

CONCLUSIONS

Our fragile and vital skin will age, and its protective and regenerative roles will diminish over time. Due to the ever-growing number of elderly and the fact that skin aging is a real health problem that complicates and is complicated by other co-morbidities, aging skin status must readily be assessed. Skin protection by emollients can ease the effects of aging on the skin. Minimising the impact of extrinsic factors in childhood by, for example, using sunscreen regularly and throughout life as well as avoiding tobacco, can also help optimise the health of aging skin.

Current wound-healing evidence has been based largely on either animal models or younger human skin models. Further research must now focus on how best to maintain skin health in the aging population. ||

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Negative pressure wound therapy for treating leg ulcers

Jo C Dumville, Lucy Land, Debra Evans, Frank Peine mann

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ABSTRACT

Background: Leg ulcers are open skin wounds that occur between the ankle and the knee that can last weeks, months or even years and are a consequence of arterial or venous valvular insufficiency. Negative pressure wound therapy (NPWT) is a technology that is currently used widely in wound care and is promoted for use on wounds. NPWT involves the application of a wound dressing to the wound, to which a machine is attached. The machine applies a carefully controlled negative pressure (or vacuum), which sucks any wound and tissue fluid away from the treated area into a canister.

Objectives: To assess the effects of negative pressure wound therapy (NPWT) for treating leg ulcers in any care setting.

Search methods: For this review, in May 2015 we searched the following databases: the Cochrane Wounds Group Specialised Register (searched 21 May 2015); the Cochrane Central Register of Controlled Trials (CENTRAL; The Cochrane Library 2015, Issue 4); Ovid MEDLINE (1946 to 20 May 2015); Ovid MEDLINE (In-Process & Other Non-Indexed Citations 20 May 2015); Ovid EMBASE (1974 to 20 May 2015); EBSCO CINAHL (1982 to 21 May 2015). There were no restrictions based on language or date of publication.

Selection criteria: Published or unpublished randomized controlled trials (RCTs) comparing the effects of NPWT with alternative treatments or different types of NPWT in the treatment of leg ulcers.

Data collection and analysis: Two review authors independently performed study selection, risk of bias assessment and data extraction.

Main results: We included one study with 60 randomized patients in the review. The study population had a range of ulcer types that were venous arteriolar-sclerotic and venous/arterial in origin. Study participants had recalcitrant ulcers that had not healed after treatment over a six-month period. Participants allocated to NPWT received continuous negative pressure until they achieved 100% granulation (wound preparation stage). A punch skin-graft transplantation was conducted and the wound then exposed to further NPWT for four days followed by standard care. Participants allocated to the control arm received standard care with dressings and compression until 100% granulation was achieved. These participants also received a punch skin-graft transplant and then further treatment with standard care. All participants were treated as inpatients until healing occurred.

There was low quality evidence of a difference in time to healing that favoured the NPWT group: the study reported an adjusted hazard ratio of 3.2, with 95% confidence intervals (CI) 1.7 to 6.2. The follow-up period of the study was a minimum of 12 months. There was no evidence of a difference in the total number of ulcers healed (29/30 in each group) over the follow-up period; this finding was also low quality evidence.

There was low quality evidence of a difference in time to wound preparation for surgery that favoured NPWT (hazard ratio 2.4, 95% CI 1.2 to 4.7).

Limited data on adverse events were collected: these provided low quality evidence of no difference in pain scores and Euroqol (EQ-5D) scores at eight weeks after surgery.

Authors’ conclusions: There is limited rigorous RCT evidence available concerning the clinical effectiveness of NPWT in the treatment of leg ulcers. There is some evidence that the treatment may reduce time to healing as part of a treatment that includes a punch skin graft transplant, however, the applicability of this find-
Negative pressure wound therapy is a treatment currently being used for wounds including leg ulcers. NPWT involves the application to the wound of a dressing to which a machine is attached. The machine then applies a carefully controlled negative pressure (or vacuum), and sucks any wound and tissue fluid away from the treated area into a canister.

The evidence for the effectiveness of NPWT in treating leg ulcers is very limited, and at present consists of only one study. The study was small with 60 participants who had hard-to-heal ulcers. The average age of these participants was 73 years, and 77% of them were women. The study was funded by the manufacturer of the NPWT machine. The study explored the use of NPWT in preparing leg ulcers for a skin graft. In the study, the ulcers were treated with NPWT or with normal (standard) care until the wounds were considered ready to have a skin graft applied. The study’s results are not relevant for leg ulcers that are not being prepared for skin grafts. Participants remained in hospitals during treatment and until their wounds healed.

There was low evidence from this study that ulcers treated with NPWT healed more quickly than those treated with standard care (dressings and compression). There was also evidence that ulcers treated with NPWT became ready for skin grafting more quickly than those treated with standard care. There were very limited results for other outcomes such as adverse events (harms) and it was not clear how information about adverse effects was collected. Twelve ulcers recurred (broke out again) in the NPWT group and 10 recurred in the standard care group.

The evidence for the effectiveness of NPWT in treating leg ulcers is very limited, and at present consists of only one study with 60 participants. This study provided evidence that NPWT may reduce time to healing as part of a treatment that includes a skin graft. At present, no RCTs have investigated the effectiveness of NPWT as a main treatment for leg ulcers. This plain language summary is up-to-date as of May 2015.
Background: Venous ulcers (also known as varicose or venous stasis ulcers) are a chronic, recurring and debilitating condition that affects up to 1% of the population. Best practice documents and expert opinion suggests that the removal of devitalised tissue from venous ulcers (debridement) by any one of six methods helps to promote healing. However, to date there has been no review of the evidence from randomised controlled trials (RCTs) to support this.

Objectives: To determine the effects of different debriding methods or debridement versus no debridement, on the rate of debridement and wound healing in venous leg ulcers.

Review question: What is the evidence that the type of wound dressing used for foot ulcers in people with diabetes affects healing?

What we found: This overview drew together and summarised evidence from 13 systematic reviews that contained 17 relevant randomised controlled trials (the best type of study for this type of question) published up to 2013. Collectively, these trials compared 10 different types of wound dressings against each other, making a total of 37 separate comparisons. The different ways in which dressing types were compared made it difficult to combine and analyse the results. Only four of the comparisons informed by direct data found evidence of a difference in ulcer healing between dressings, but these results were classed as low quality evidence.

There was no clear evidence that any of the ‘advanced’ wound dressing types were any better than basic wound contact dressings for healing foot ulcers. The overview findings were restricted by the small amount of information available (a limited number of trials involving small numbers of participants). Until there is a clear answer about which type of dressing performs best for healing foot ulcers in people with diabetes, other factors, such as clinical management of the wound, cost, and patient preference and comfort, should influence the choice of dressing.

This plain language summary is up-to-date as of April 2015.

August 2015:

Debridement for venous leg ulcers

Georgina Gethin, Seamus Cowman, Dinanda N Kolbach


ABSTRACT

Background: Venous ulcers (also known as varicose or venous stasis ulcers) are a chronic, recurring and debilitating condition that affects up to 1% of the population. Best practice documents and expert opinion suggests that the removal of devitalised tissue from venous ulcers (debridement) by any one of six methods helps to promote healing. However, to date there has been no review of the evidence from randomised controlled trials (RCTs) to support this.

Objectives: To determine the effects of different debriding methods or debridement versus no debridement, on the rate of debridement and wound healing in venous leg ulcers.

Search methods: In February 2015 we searched: The Cochrane Wounds Group Specialised Register; The Cochrane Central Register of Controlled Trials (CENTRAL); Ovid MEDLINE; Ovid MEDLINE (In-Process & Other Non-Indexed Citations); Ovid EMBASE and EBSCO CINAHL. There were no restrictions with respect to language, date of publication or study setting. In addition we handsearched conference proceedings, journals not cited in MEDLINE, and the bibliographies of all retrieved publications to identify potential studies. We made contact with the pharmaceutical industry to enquire about any completed studies.

Selection criteria: We included RCTs, either published or unpublished, which compared two methods of debridement or compared debridement with no debridement. We presented study results in a narrative form, as meta-analysis was not possible.

Data collection and analysis: Independently, two review authors completed all study selection, data extraction and assessment of trial quality; resolution of disagreements was completed by a third review author.

Main results: We identified 10 RCTs involving 715 participants. Eight RCTs evaluated autolytic debridement and included the following agents or dressings: biocellulose wound dressing (BWD), non-adherent dressing, honey gel, hydrogel (gel formula), hydrofibre dressing, hydrocolloid dressings, dextranomer beads, Edinburgh University Solution of Lime (EUSOL) and paraffin gauze. Two RCTs evaluated enzymatic preparations and one evaluated biosurgical debridement. No RCTs evaluated surgical, sharp or mechanical methods of debridement, or debridement versus no debridement. Most trials were at a high risk of bias.

Three RCTs assessed the number of wounds completely debrided. All three of these trials compared two different methods of autolytic debridement (234 participants), with two studies reporting statistically significant results: one study (100 participants) reported that 40/50 (80%) ulcers treated with dextranomer beads and 7/50 (14%) treated with EUSOL achieved complete debridement (RR 5.71, 95% CI 2.84 to 11.52); while the other trial (86 participants) reported the number of ulcers completely debrided as 31/46 (76%) for hydrogel versus 18/40 (45%) for paraffin gauze (RR 0.67, 95% CI 0.45 to 0.99). One study (48 participants) reported that by 12 weeks, 15/18 (84%) ulcers treated with BWD had achieved a 75% to 100% clean, granulating wound bed versus 4/15 (26%) treated with non-adherent petrolatum emulsion-impregnated gauze.

Four trials assessed the mean time to achieve debridement: one (86 participants) compared two autolytic debridement methods, two compared autolytic methods with enzymatic debridement (71 participants), and the last (12 participants) compared autolytic with biosurgical debridement; none of the results achieved statistical significance.

Two trials that assessed autolytic debridement methods reported the number of wounds healed at 12 weeks. One trial (108 participants) reported that 24/54 (44%) ulcers treated with honey healed versus 18/54 (33%) treated with hydrogel (RR (adjusted for baseline wound diameter) 1.38, 95% CI 1.02 to
1.88; P value 0.037). The second trial (48 participants) reported that 7/25 (28%) ulcers treated with BWD healed versus 7/23 (30%) treated with non-adherent dressing.

Reduction in wound size was assessed in five trials (444 participants) in which two autolytic methods were compared. Results were statistically significant in one three-armed trial (153 participants) when cadexomer iodine was compared to paraffin gauze (mean difference 24.9 cm², 95% CI 7.27 to 42.53, P value 0.006) and hydrocolloid compared to paraffin gauze (mean difference 23.8 cm², 95% CI 5.48 to 42.12, P value 0.01). A second trial that assessed reduction in wound size based its results on median differences and, at four weeks, produced a statistically significantly result that favoured honey over hydrogel (P value < 0.001). The other three trials reported no statistically significant results for reduction in wound size, although one trial reported that the mean percentage reduction in wound area was greater at six and 12 weeks for BWD versus a non-adherent dressing (44% versus 24% week 6; 74% versus 54% week 12).

Pain was assessed in six trials (544 participants) that compared two autolytic debridement methods, but the results were not statistically significant. No serious adverse events were reported in any trial.

**Authors’ conclusions:** There is limited evidence to suggest that actively debriding a venous leg ulcer has a clinically significant impact on healing. The overall small number of participants, low number of studies and lack of meta-analysis in this review precludes any strong conclusions of benefit. Comparisons of different autolytic agents (hydrogel versus paraffin gauze; Dextranomer beads versus EUSOL and BWD versus non-adherent dressings) and Larvae versus hydrogel all showed statistically significant results for numbers of wounds debrided. Larger trials with follow up to healing are required.

**Plain language summary**

**Debridement for venous leg ulcers**

**Background:** Venous leg ulcers are a common type of leg wound. They can cause pain, stress, social isolation and depression. These ulcers take approximately 12 weeks to heal and the best and first treatment to try is compression bandages. In an attempt to improve the healing process it is thought that removing dead or dying tissue (debridement) from the surface of the wound can speed up healing. Six different methods can be used to achieve debridement: use of an instrument such as a scalpel (with or without anaesthesia - surgical debridement and sharp debridement, respectively); washing solutions and dressings (mechanical debridement); enzymes that break down the affected tissue (enzymatic debridement); moist dressings or natural agents, or both, to promote the wound’s own healing processes (autolytic debridement); or maggots (biosurgical debridement).

**Objectives:** We assessed evidence from medical research to try to determine how effective these different methods of debridement are in debriding wounds. We also wanted to understand what effect, if any, debridement has on the healing of venous ulcers, and whether any method of debridement is better than no debridement when it comes to wound healing.

**Search methods:** We searched a wide range of electronic databases and also reports from conferences up to 10 February 2015. We included studies written in any language that included men and women of any age, cared for in any setting, from any country, and we did not set a limit on the years in which studies were published. We were only interested in robust research, and so restricted our search to randomised controlled trials (in which people are randomly allocated to the methods being tested). All trial participants were required to have a venous ulcer with dead tissue (slough) present in the wound.

**Results:** We found ten studies that included a total of 715 participants. These were conducted in a range of countries and care settings. Participants had an average age of 68 years, and there were more women than men. Most of the studies were small, with half of them having fewer than 67 participants. The trials tested a range of debridement methods including: autolytic methods such as non-adherent dressings; very small beads; biocellulose dressings; honey; gels; gauze and methods using enzymes. Autolytic methods of debridement, were the most frequently tested. We identified no studies that tested surgical, sharp or mechanical methods of debridement and no studies that tested debridement against no debridement.

It was not possible to say whether any of the methods evaluated performed better than the rest. There was some evidence to suggest that sloughy ulcers that had more than 50% of slough removed after four weeks were more likely to heal by 12 weeks; and some evidence to suggest that ulcers debrided using honey were more likely to heal by 12 weeks than ulcers debrided with hydrogel. What remains uncertain at this time is whether debridement itself, or any particular form of debridement is beneficial in the treatment of venous ulcers.

The overall quality of the evidence we identified was low, as studies were small in size, and most were of short duration. There were differences between them in terms of the amount of slough in the wound bed of the ulcers at the start of the trial, in treatment regimes, the duration of treatments, and the methods used to assess how well the debridement treatments had worked. In six trials, the people assessing the wounds were aware of the type of treatment each patient was receiving, which may have affected the impartiality of their evaluations. Five studies did not provide information on all the results (outcomes) in their trials, and this missing information on important benefits or harms of the debridement method being evaluated meant that those trials were at a high risk of bias and of producing unreliable results. Only two studies reported side effects due to the treatment; these included maceration (or wetness) of the skin around the ulcers, infection and skin inflammation.

**September 2015:**

**Systemic antibiotics for treating diabetic foot infections**

Anna Selva Olid, Ivan Solá, Leticia A Barajas-Nava, Oscar D Gianneo, Xavier Bonfill Cosp, Benjamin A Lipsky

Citation example: Selva Olid A, Solá I, Barajas-Nava LA, Gianneo OD, Bonfill Cosp X, Lipsky BA. Systemic antibiotics for treating diabetic foot infections. Cochrane Database of Systematic
ABSTRACT
Background: Foot infection is the most common cause of non-traumatic amputation in people with diabetes. Most diabetic foot infections (DFIs) require systemic antibiotic therapy and the initial choice is usually empirical. Although there are many antibiotics available, uncertainty exists about which is the best for treating DFIs.

Objectives: To determine the effects and safety of systemic antibiotics in the treatment of DFIs compared with other systemic antibiotics, topical foot care or placebo.

Search methods: In April 2015 we searched the Cochrane Wounds Group Specialised Register; The Cochrane Central Register of Controlled Trials (CENTRAL; The Cochrane Library); Ovid MEDLINE, Ovid MEDLINE (In-Process & Other Non-Indexed Citations); Ovid EMBASE, and EBSCO CINAHL. We also searched in the Database of Abstracts of Reviews of Effects (DARE; The Cochrane Library), the Health Technology Assessment database (HTA; The Cochrane Library), the National Health Service Economic Evaluation Database (NHS-EED; The Cochrane Library), unpublished literature in OpenSIGLE and ProQuest Dissertations and on-going trials registers.

Selection criteria: Randomised controlled trials (RCTs) evaluating the effects of systemic antibiotics (oral or parenteral) in people with a DFI. Primary outcomes were clinical resolution of the infection, time to its resolution, complications and adverse effects.

Data collection and analysis: Two review authors independently selected studies, assessed the risk of bias, and extracted data. Risk ratios (RR) were estimated for dichotomous data and, when sufficient numbers of comparable trials were available, trials were pooled in a meta-analysis.

Main results: We included 20 trials with 3791 participants. Studies were heterogenous in study design, population, antibiotic regimens, and outcomes. We grouped the sixteen different antibiotic agents studied into six categories: 1) anti-pseudomonal penicillins (three trials); 2) broad-spectrum penicillins (one trial); 3) cephalosporins (two trials); 4) carbapenems (four trials); 5) fluoroquinolones (six trials); 6) other antibiotics (four trials). Only 9 of the 20 trials protected against detection bias with blinded outcome assessment. Only one-third of the trials provided enough information to enable a judgement about whether the randomisation sequence was adequately concealed. Eighteen out of 20 trials received funding from pharmaceutical industry-sponsors.

The included studies reported the following findings for clinical resolution of infection: there is evidence from one large trial at low risk of bias that patients receiving ertapenem with or without vancomycin are more likely to have resolution of their foot infection than those receiving tigecycline (RR 0.92, 95% confidence interval (CI) 0.85 to 0.99; 955 participants). It is unclear if there is a difference in rates of clinical resolution of infection between: 1) two alternative anti-pseudomonal penicillins (one trial); 2) an anti-pseudomonal penicillin and a broad-spectrum penicillin (one trial) or a carbapenem (one trial); 3) a broad-spectrum penicillin and a second-generation cephalosporin (one trial); 4) cephalosporins and other beta-lactam antibiotics (two trials); 5) carbapenems and anti-pseudomonal penicillins or broad-spectrum penicillins (four trials); 6) fluoroquinolones and anti-pseudomonal penicillins (four trials) or broad-spectrum penicillins (two trials); 7) daptomycin and vancomycin (one trial); 8) linezolid and a combination of aminopenicillins and beta-lactamase inhibitors (one trial); and 9) clindamycin and cephalexin (one trial).

Carbapenems combined with anti-pseudomonal agents produced fewer adverse effects than anti-pseudomonal penicillins (RR 0.27, 95% CI 0.09 to 0.84; 1 trial). An additional trial did not find significant differences in the rate of adverse events between a carbapenem alone and an anti-pseudomonal penicillin, but the rate of diarrhoea was lower for participants treated with a carbapenem (RR 0.58, 95% CI 0.36 to 0.93; 1 trial). Daptomycin produced fewer adverse effects than vancomycin or other semi-synthetic penicillins (RR 0.61, 95%CI 0.39 to 0.94; 1 trial). Linezolid produced more adverse effects than ampicillin-sulbactam (RR 2.66; 95% CI 1.49 to 4.73; 1 trial), as did tigecycline compared to ertapenem with or without vancomycin (RR 1.47, 95% CI 1.34 to 1.60; 1 trial). There was no evidence of a difference in safety for the other comparisons.

Authors’ conclusions: The evidence for the relative effects of different systemic antibiotics for the treatment of foot infections in diabetes is very heterogeneous and generally at unclear or high risk of bias. Consequently it is not clear if any one systemic antibiotic treatment is better than others in resolving infection or in terms of safety. One non-inferiority trial suggested that ertapenem with or without vancomycin is more effective in achieving clinical resolution of infection than tigecycline. Otherwise the relative effects of different antibiotics are unclear. The quality of the evidence is low due to limitations in the design of the included trials and important differences between them in terms of the diversity of antibiotics assessed, duration of treatments, and time points at which outcomes were assessed. Any further studies in this area should have a blinded assessment of outcomes, use standardised criteria to classify severity of infection, define clear outcome measures, and establish the duration of treatment.

Plain language summary
Antibiotics to treat foot infections in people with diabetes

Review question: We reviewed the effects on resolution of infection and safety of antibiotics given orally or intravenously (directly into the blood system) in people with diabetes that have a foot infection.

Background: One of the most frequent complications of people with diabetes is foot disorders, specially foot ulcers or wounds. These wounds can easily become infected, and are known as a diabetic foot infections (DFIs). If they are not treated, the infection can progress rapidly, involving deeper tissues and threatening survival of the limb. Sometimes these infections conclude with the affected limb needing to be amputated. Most DFIs require treatment with systemic antibiotics, that is, antibiotics that are taken orally, or are inserted straight into the bloodstream (intravenously), and affect the whole body. The
choice of the initial antibiotic treatment depends on several factors such as the severity of the infection, whether the patient has received another antibiotic treatment for it, or whether the infection has been caused by a micro-organism that is known to be resistant to usual antibiotics (e.g. methicillin-resistant Staphylococcus aureus - better known as MRSA). The objective of antibiotic therapy is to stop the infection and ensure it does not spread.

There are many antibiotics available, but it is not known whether one particular antibiotic - or type of antibiotic - is better than the others for treatment of DFIs.

The investigation: We searched through the medical literature up to March 2015 looking for randomised controlled trials (which produce the most reliable results) that compared different systemic antibiotics against each other, or against antibiotics applied only to the infected area (topical application), or against a fake medicine (placebo) in the treatment of DFIs.

Study characteristics: We identified 20 relevant randomised controlled trials, with a total of 3791 participants. Eighteen of the 20 studies were funded by pharmaceutical companies. All trials compared systemic antibiotics with other systemic antibiotics.

Key results: It is unclear whether any particular antibiotic is better than any another for curing infection or avoiding amputation. One trial suggested that ertapenem (an antibiotic) with or without vancomycin (another antibiotic) is more effective than tigecycline (another antibiotic) for resolving DFI. It is also generally unclear whether different antibiotics are associated with more or fewer adverse effects. The following differences were identified:

1. carbapenems (a class of antibiotic) combined with anti-pseudomonal agents (antibiotics that kill Pseudomonas bacteria) produced fewer adverse effects than anti-pseudomonal penicillins (another class of antibiotic);
2. daptomycin (an antibiotic) caused fewer adverse effects than vancomycin or other semi-synthetic penicillins (a class of antibiotic);
3. linezolid (an antibiotic) caused more harm than ampicillin-sulbactam (a combination of antibiotics);
4. tigecycline produced more adverse effects than the combination of ertapenem with or without vancomycin.

Quality of the evidence: There were important differences between the trials in terms of the diversity of antibiotics assessed, the duration of treatments, and the point at which the results were measured. The included studies had limitations in the way they were designed or performed, as a result of these differences and design limitations, our confidence in the findings of this review is low.

September 2015:

Support surfaces for pressure ulcer prevention
Elizabeth McInnes, Asmara Jammali-Blasi, Sally EM Bell-Syer, Jo C Dumville, Victoria Middleton, Nicky Cullum


ABSTRACT

Background: Pressure ulcers (i.e. bedsores, pressure sores, pressure injuries, decubitus ulcers) are areas of localised damage to the skin and underlying tissue. They are common in the elderly and immobile, and costly in financial and human terms. Pressure-relieving support surfaces (i.e. beds, mattresses, seat cushions etc) are used to help prevent ulcer development.

Objectives: This systematic review seeks to establish: (1) the extent to which pressure-relieving support surfaces reduce the incidence of pressure ulcers compared with standard support surfaces, and, (2) their comparative effectiveness in ulcer prevention.

Search methods: In April 2015, for this fourth update we searched The Cochrane Wounds Group Specialised Register (searched 15 April 2015) which includes the results of regular searches of MEDLINE, EMBASE and CINAHL and The Cochrane Central Register of Controlled Trials (CENTRAL) (The Cochrane Library 2015, Issue 3).

Selection criteria: Randomised controlled trials (RCTs) and quasi-randomised trials, published or unpublished, that assessed the effects of any support surface for prevention of pressure ulcers, in any patient group or setting which measured pressure ulcer incidence. Trials reporting only proxy outcomes (e.g. interface pressure) were excluded. Two review authors independently selected trials.

Data collection and analysis: Data were extracted by one review author and checked by another. Where appropriate, estimates from similar trials were pooled for meta-analysis.

Main results: For this fourth update six new trials were included, bringing the total of included trials to 59.

Foam alternatives to standard hospital foam mattresses reduce the incidence of pressure ulcers in people at risk (RR 0.40 95% CI 0.21 to 0.74). The relative merits of alternating and constant low-pressure devices are unclear. One high-quality trial suggested that alternating-pressure mattresses may be more cost effective than alternating-pressure overlays in a UK context.

Pressure-relieving overlays on the operating table reduce post-operative pressure ulcer incidence, although two trials indicated that foam overlays caused adverse skin changes. Meta-analysis of three trials suggest that Australian standard medical sheepskins prevent pressure ulcers (RR 0.56 95% CI 0.32 to 0.97).
**Authors’ conclusions:** People at high risk of developing pressure ulcers should use higher-specification foam mattresses rather than standard hospital foam mattresses. The relative merits of higher-specification constant low-pressure and alternating-pressure support surfaces for preventing pressure ulcers are unclear, but alternating-pressure mattresses may be more cost effective than alternating-pressure overlays in a UK context. Medical grade sheepskins are associated with a decrease in pressure ulcer development. Organisations might consider the use of some forms of pressure relief for high risk patients in the operating theatre.

**Plain language summary**

**Can pressure ulcers be prevented by using different support surfaces?**

Pressure ulcers (also called bed sores, pressure sores and pressure injuries) are ulcers on the skin caused by pressure or rubbing at the weight-bearing, bony points of immobolised people (such as hips, heels and elbows). Different support surfaces (e.g. beds, mattresses, mattress overlays and cushions) aim to relieve pressure, and are used to cushion vulnerable parts of the body and distribute the surface pressure more evenly. The review found that people lying on ordinary foam mattresses are more likely to get pressure ulcers than those lying on a higher-specification foam mattress. In addition the review also found that people who used sheepskin overlays on their mattress developed fewer pressure ulcers. While alternating-pressure mattresses may be more cost effective than alternating-pressure overlays, the evidence base regarding the merits of higher-specification constant low-pressure and alternating-pressure support surfaces for preventing pressure ulcers is unclear. Rigorous research comparing different support surfaces is needed.

**February 2016:**

**Skin grafting and tissue replacement for treating foot ulcers in people with diabetes**

Trientje B Santema, Paul PC Poyck, Dirk T Ubbink


**ABSTRACT**

**Background:** Foot ulceration is a major problem in people with diabetes and is the leading cause of hospitalisation and limb amputations. Skin grafts and tissue replacements can be used to reconstruct skin defects for people with diabetic foot ulcers in addition to providing them with standard care. Skin substitutes can consist of bioengineered or artificial skin, autografts (taken from the patient), allografts (taken from another person) or xenografts (taken from animals).

**Objectives:** To determine the benefits and harms of skin grafting and tissue replacement for treating foot ulcers in people with diabetes.

**Search methods:** In April 2015 we searched: The Cochrane Wounds Specialised Register; the Cochrane Central Register of Controlled Trials (CENTRAL) (The Cochrane Library); Ovid MEDLINE; Ovid MEDLINE (In-Process & Other Non-Indexed Citations); Ovid EMBASE and EBSCO CINAHL. We also searched clinical trial registries to identify ongoing studies. We did not apply restrictions to language, date of publication or study setting.

**Selection criteria:** Randomised clinical trials (RCTs) of skin grafts or tissue replacements for treating foot ulcers in people with diabetes.

**Data collection and analysis:** Two review authors independently extracted data and assessed the quality of the included studies.

**Main results:** We included seventeen studies with a total of 1655 randomised participants in this review. Risk of bias was variable among studies. Blinding of participants, personnel and outcome assessment was not possible in most trials because of obvious differences between the treatments. The lack of a blinded outcome assessor may have caused detection bias when ulcer healing was assessed. However, possible detection bias is hard to prevent due to the nature of the skin replacement products we assessed, and the fact that they are easily recognisable. Strikingly, nearly all studies (15/17) reported industry involvement; at least one of the authors was connected to a commercial organisation or the study was funded by a commercial organisation. In addition, the funnel plot for assessing risk of bias appeared to be asymmetrical; suggesting that small studies with ‘negative’ results are less likely to be published.

Sixteen of the included studies reported on adverse events in various ways. No study reported a statistically significant difference in the occurrence of adverse events between the intervention and the control group.

Only two of the included studies reported on total incidence of lower limb amputations. We found fewer amputations in the experimental group compared with the standard care group when we pooled the results of these two studies, although the absolute risk reduction for amputation was small (RR 0.43, 95% CI 0.23 to 0.81; risk difference (RD) -0.06, 95% CI -0.10 to -0.01, very low quality of evidence).

**Authors’ conclusions:** Based on the studies included in this review, the overall therapeutic effect of skin grafts and tissue replacements...
replacements used in conjunction with standard care shows an increase in the healing rate of foot ulcers and slightly fewer amputations in people with diabetes compared with standard care alone. However, the data available to us was insufficient for us to draw conclusions on the effectiveness of different types of skin grafts or tissue replacement therapies. In addition, evidence of long term effectiveness is lacking and cost-effectiveness is uncertain.

Plain language summary
Skin grafting and tissue replacement for treating foot ulcers in people with diabetes
Background: Foot ulceration is a major problem in people with diabetes and is the leading cause of hospital admissions and limb amputations. Despite the current variety of strategies available for the treatment of foot ulcers in people with diabetes, not all ulcers heal completely. Additional treatments with skin grafts and tissue replacement products have been developed to help complete wound closure.

Review question: What are the benefits and harms of skin grafting and tissue replacement for treating foot ulcers in people with diabetes?

What we found: We included thirteen randomised studies that compared two types of skin grafts or tissue replacements with standard care and four randomised studies that compared two grafts or tissue replacements with each other. In total 1655 patients were randomised in these seventeen trials. Risk of bias was variable among studies. The biggest drawbacks were the lack of blinding (i.e. patients and investigators were aware who was receiving the experimental therapy and who was receiving the standard therapy), industry involvement and the possibility that small studies were less likely to be published if they reported ‘negative’ results. Adverse advent rates (harm due to the treatment) varied widely.

Conclusion: Based on the seventeen studies included in this review, skin grafts and tissue replacements, used in conjunction with standard care, increase the healing rate of foot ulcers and lead to slightly fewer amputations in people with diabetes compared with standard care alone. However, evidence of long term effectiveness is lacking and cost-effectiveness is uncertain. There was not enough evidence for us to be able to recommend a specific type of skin graft or tissue replacement.

This plain language summary is up-to-date as of 9 April 2015.

The Neuropathic Osteoarthropathic Foot

23-25 June 2016
(Charcot Foot Course) Rheine, Germany

About the 3rd Charcot Foot Course
The three day theoretical & practical course gives participants a thorough view of the different aspects of the diagnosis, treatment and management of the Charcot Foot. The course will consist of practical sessions in small groups, where the main focus will be on training the diagnostic and treatment skills necessary for the interdisciplinary treatment of Charcot patients. In addition, state of the art lectures as well as pro and contra presentations of disputed topics will be given by international specialists in the field.

Venue, practical part:
Mathias-Spital, Interdisciplinary Diabetic Foot Centre, Rheine, Germany

Venue, theoretical part:
Mathias-Spital, University of Applied Sciences, Rheine, Germany

Form:
Hands-on workshops/training in clinic combined with lectures

Language: English

Participant registration fee:
Early registration (before 1 March 2016): 950 € excl. accommodation
Late registration (from 1 March 2016): 1150 € excl. accommodation

References:

This plain language summary is up-to-date as of 9 April 2015.
Mepilex® XT – Take control of exuding wounds. Exuding wounds are a tough challenge for patients and for you. But the right dressing can make a world of difference. Designed for use on all exuding wound healing stages, Mepilex® XT with Safetac® has been shown to support longer wear times and so require fewer dressing changes than other foam dressings. It, like all dressings with Safetac, minimizes pain and skin damage, supports faster healing and helps prevent moisture-related complications.

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Vladimir N. Obolensky, Darya A. Ermolova, Leonid A. Laberk, Tatiana V. Semenova.
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“Management of Proteases in the Chronic Wound”
Speaker: Terry Treadwell, MD, FACS Medical Director, Institute for Advanced Wound Care

Thursday May 12, 2016 | 15:45 - 16:45 | Room Franzius

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EWMA anniversary

MILESTONES IN EWMA’S HISTORY

EWMA would like to use the opportunity of our 25th Anniversary to thank all previous members of the EWMA Council for their great contributions to the development of the organisation with their visions and ideas, as well as their hard work.

1991
EWMA founded. First EWMA conference held in Cardiff, Wales. Arranged by the Publishing House Macmillan Magazines Ltd.

1993-1995
Carol Dealey

1995-1996
David Leaper

1996-1997
Chris Lawrence

1997-1998
George Cherry

1997-1998
Finn Gottrup

1999-2001
Christine Moffatt

2000
First independent EWMA Conference held in Stockholm

2001
EWMA secretariat established in Copenhagen (CAP Partner, previously Congress Consultants).

2001
First issue of the EWMA Journal published. Now approx. 12,000 copies are distributed to clinicians throughout Europe.

EWMA Presidents 1991-2001

1991-1993
Terrence Turner

1993-1995
Carol Dealey

1995-1996
David Leaper

1996-1997
Chris Lawrence

1997-1998
George Cherry

1998-1999
Finn Gottrup

1999-2001
Christine Moffatt
2001
First EWMA position document published. Since then, various aspects of wound management have been covered.

2001
The EWMA Educational development Project was initiated (Later placed under the EWMA Education Committee)

2001
EWMA cooperating organisation model established. This network now includes 53 organisations in 36 countries.

2003
First EWMA Wound Education Curriculum developed.

2007
EWMA University Conference Model pilot. The EWMA conference is now an integrated part of wound management education for post graduate students in a number of educational institutions throughout Europe.

2008
EWMA course endorsement programme established.

2008
Collaboration with Eucomed Advanced Wound Care Sector Group on defining the “burden of illness” associated with chronic wounds in Europe.

2008
EWMA Patient Outcome Group established. The initial objective was to examine the challenges related to acquiring high quality evidence in wound care.

2009
EWMA started an international partner programme, to formalise and further develop knowledge sharing and collaboration with like-minded associations in other parts of the world.

EWMA Presidents 2001-2009

2001-2005
Peter Vowden

2005-2007
Peter Franks

2007-2009
Marco Romanelli
2010
First deliverable of the EWMA Patient Outcome Group: Publication of the Outcomes in controlled and comparative studies on non-healing wounds – Recommendations to improve the quality of evidence in wound management.

2010
EWMA started working actively to create awareness about non healing wounds in the European Parliament. This led to a series of advocacy activities targeting European level policy makers, in particular related to the European Commission supported EU Joint Action on patient safety (PASQ).

2012
EWMA became part of the EU supported ‘SWAN-iCare’ project (EU FP7) and the ‘United4Health’ project (ICT PSP).

2012
First meeting of the EWMA Teacher Network established to strengthen collaboration between European educators working with wound care and EWMA.

2013
EWMA Patient panel established. Increased focus on wound patient rights and development of patient information.

2013
EWMA President, Jan Apelqvist, became member of the board of the Association for Advancement of Wound Care (AAWC, US).

2013
EWMA confirmed as collaborating partner of the EU supported Joint Action on chronic disease management (CHRODIS-JA) with focus on improving the prevention and management of diabetic foot ulcers across Europe.

EWMA Presidents 2009-2015

2009-2011
Zena Moore

2011-2013
Jan Apelqvist

2013-2015
Salla Seppänen
2014
First joint position document, written in collaboration with international partners AAWC and Wounds Australia: Managing Wounds as a Team: Exploring the concept of a team approach to wound care.

2014
The EWMA antimicrobial stewardship programme was initiated. This originated from the publication of the EWMA Document: Antimicrobials and Non-healing Wounds (published in 2013). The stewardship programme led to a close collaboration with the British Society for Antimicrobial Chemotherapy (BSAC).

2015
Development of a EWMA wound centre endorsement programme and pilot endorsements in China and Brazil.

2015
EWMA welcomed a representative from the international partner organisations AAWC (US) and Wounds Australia as co-opted members of the EWMA Council.

2016
First National Wound Care Round Table, held in collaboration with a EWMA Cooperating Organisation organised by the Lithuanian Wound Management Association, in Kaunas, Lithuania.
25 years of EWMA conferences

During the previous 25 years, EWMA has visited many great cities and countries with our annual (and in some years bi-annual) conference. The majority of these have been held in collaboration with national wound management associations, many of which became cooperating organisations of EWMA in 2001 when this formalised collaboration was initiated.

Below is an overview of the previous EWMA conferences and their visual design. We look forward to visiting new cities in future years. Upcoming are EWMA 2017 in Amsterdam and EWMA 2018 in Poland.
The EWMA conference – 25 years of successful development

Since the year 2000, EWMA has continuously worked on developing the annual conference to include all the different aspects of wound management. We have also extended the collaboration with many of our partner organisations to include exchanges of knowledge during the EWMA Conference and vice versa. At the same time we have experienced an increasing interest from participants as well as exhibitors in using the EWMA conference as a hub for knowledge exchange and networking. This increase is illustrated in the graphs below:

Total number of participants

Scientific presentations

Exhibiting companies

Countries represented

Growth of EWMA exhibition in total number of exhibitors over the last 7 years (2009 -2015)

Development in the number of countries represented by participants at the EWMA Conferences (2001-2015).
Twenty-five years; that’s a quarter of a century, a generation. Children have been born, grown up and probably have children of their own; it’s quite a long time! The European Wound Management Association is 25 years old in 2016. That represents quite an achievement, particularly when one considers the heterogeneous nature of its members and the disparate countries they hail from. The authors most of whom were among the founding members of EWMA, were of course, bright young things back in 1991. Today they may have a grey hair or two, but are still as passionate about wound care as they were then. This article outlines the EWMA story.

Pop EWMA into an internet search engine and aside from the European Wound Management Association, one can find something called the ‘exponentially weighted moving average’. This is used to monitor the output of a business by tracking either the moving average of the output or average of performance over the lifetime of the process. The EWMA is constantly re-calculated while the process is in operation, giving greater weight to recent measurements to show the effect of process improvements.

Perhaps this can be used as an analogy for the work of ‘your’ EWMA. Let’s ask a question: How many wound management/tissue viability societies across Europe does the European Wound Management Association (EWMA) represent?

A) I DON’T KNOW
B) QUITE A FEW
C) 53, ACROSS 36 COUNTRIES

ANSWER – YES, IT’S C.
EWMA is both an umbrella organisation linking wound management associations across Europe, and a multi-
disciplinary group bringing together individuals and organisations interested in wound management. It works to promote the advancement of education and research into native epidemiology, pathology, diagnosis, prevention and management of wounds of all aetiologies. If we consider the outputs of each individual society in relation to wound care, for example, venous leg ulcer healing rates, we may see small improvements over say, ten years. If however, we pool outcomes, we would see a bigger trend to improvement – the improvements in years 1 and 2 are considered, but the outcomes in year 9 would carry greater weight and show greater improvements. In effect, this is what the EWMA does – it re-calculates the ‘average’ output (clinical approaches) and brings them together as a whole to demonstrate how collective data and sharing of information can improve the ‘business’ of wound care.

TABULA RASA
EWMA was founded in 1991. Sue Bale, one of the founding members, recollects that given the success of the Advances in Wound Care Symposium and its Association in the USA, a posse of wound management professionals came together to consider whether a similar European society would be possible or feasible, given the multiple health care systems and languages across Europe. Fortunately, the general consensus was that they were all willing and ready to give a European version of the Association for Advances in Wound Care a try.

Accordingly, Terence Turner was elected as President and the Council was established. As Christina says; “...I remember the pride when asked to be a EWMA board member in the very early days. To come together in constructive work with all the giants – the Welsh group, Keith Harding, Sue Bale and Mike Clark, the Oxford-group, Terence Ryan and his co-workers, Finn Gottrup who was already working on the establishment of a wound healing centre in Copenhagen, Christine Moffat with her groundbreaking research in leg ulcer epidemiology and nursing care, and Carol Dealey with her work in pressure ulcers! We who were early on board remember the unexplored fields of research - a true tabula rasa. We were all scientific entrepreneurs, and breakers of new Conference Planning meeting before the EWMA meeting in Granada, Spain, 2002.

FOUNDING PRINCIPLES
One of the founding principles was that EWMA would be all inclusive across the professions and countries. Sue recollects: “We recognised that there might be challenges but we were...”
determined to acknowledge the input that every professional group could bring. We were also cognisant of the value, expertise and diversity of each country within Europe and how we could learn from each other”.

Another principle was that we would seek to provide education, promote research and inform clinical practice across the broad range of wound aetiologies. Finn concurs: “…to promote the advancement of education and research into native epidemiology, pathology, diagnosis, prevention and management of wounds of all aetiologies. In general it was to establish better knowledge, education and organisation of the wound area”.

The important issue was perhaps ‘native’ epidemiology. The organisation had to somehow find a way of ensuring that education and any policy directives took into account the issues affecting individual countries.

Based on these principles, EWMA’s original mission statement included an ambition to provide support for patients and carers and lay people, with the focus on improving wound care for all.

EARLY DAYS
Existing associations and societies at the time generally were focussed on one country, health care system or wound aetiology. While they provide a valuable resource for patients and clinical staff working in that specialty, they are by their nature limiting. EWMA therefore actively sought to emulate the American Association for Advances in Wound care (AAWC) and their symposium. However, up until 1994 EWMA’s activity was largely centred on the UK; only Finn, and a little later Christina, represented Europe. As Finn says: “…For this reason it was…a little difficult to call EWMA a European organisation!”

In its infancy, EWMA was supported by the Journal of Wound Care (Emap Ltd) and its activities largely centred on the annual conference. Mostly these were held in the UK, but Copenhagen, Milan and Madrid also hosted. From extra-curricula meetings at the conferences, various position and consensus documents were produced and clinical studies were coordinated and shared. Christina recalls:

“I personally remember the first four clinical studies in the world with hydrocolloid on leg ulcers. … peristomal ulceration had been healed with the first hydrocolloid, Stomahesive, so we studied the effect of a more flexible wafer on leg ulcers - with quite an effect. From these results, the first interactive wound dressing was born”.

By 1999 during Finn’s Presidency, it was clear that formal administrative support was required and that EWMA was
ready to be a stand-alone, independent organisation, and that the conference should be hosted by member countries, working with national wound care organisations. Accordingly, in 2000, with Christine Moffatt as President, the administrative function was taken over by Henrik Nielsen and the CAP Partner (formerly Congress Consultants) team. Chris recalls that this enabled her, the new Council and the team to formulate and implement a strategic plan; sub sections within the plan included the organisational aspects of EWMA becoming a stand-alone entity, the education and publishing aspects (position documents, consensus documents, best practice documents, etc), working with industry, and working with associate organisations. Today, the team continues to drive EWMA forward, and is according to Finn, “…one of the most important reasons for EWMA’s size and position in Europe and the rest of the world today”.

Christina recollects the conference in Stockholm she helped to organise:
“For me, the first independent EWMA conference in Stockholm in 2000 of course played a very special role. I was responsible for the conference as local organiser, and with my small team from Uppsala we tried to handle all the practical issues. This was also my first acquaintance with Henrik Nielsen; we worked together well and what a success the conference became! One small nightmare occurred when one of the excursion boats with all the Finnish delegates on board was stranded — I still shiver at the memory! I think this conference was a major step forward for EWMA. It was also the first European Conference where EWMA joined forces with veterinarians, who were lyrical about this initiative (but a bit undisciplined to work with!)

Having become a truly European organisation, the annual conferences have been held in places such as Helsinki, Prague, Grenada, Brussels and Vienna to name but a few. As Sue remarks:
“Holding the… conference in different countries enables the clinical population of that country to attend…, which might not be possible in years where it is held elsewhere”.

Many delegates play the ‘how many conferences have you been to?’ game each year. It is for many members, a source of pride that they belong to an organisation that has a twenty-five year history, and that is so truly multi-national and so dynamic.

OUR UNIQUE SELLING POINT
While other international groups exist, each with largely similar aims and objectives, the EWMA’s driving ideal is to improve wound care across all health economies. EWMA achieves this through three main principles:

- Advocacy - EWMA works continuously to improve European wound patients’ quality of life by identifying and advocating the highest quality treatment available and assessing its cost effectiveness from a multidisciplinary point of view. Recent past presidents and the EWMA office have been politically active, drawing attention to the numbers of patients with chronic wounds and the associated costs. This has been achieved through targeting policy makers and key opinion leaders in the European Union and national governments. EWMA is also focusing on patient pathways and the value and role of multi disciplinary teams

- Education – EWMA strives to work from common ground; EWMA has produced a wide selection of position documents and papers, many of which are translated and disseminated. All such documents are written by subject experts and have included topics such as compression, new technologies, different wound aetiologies and home care. Each explores the underlying theory, together with best practice and the evidence base, so providing the reader with a rounded perspective

- Collaboration - The partner organisations of EWMA are divided into three partnership categories; cooperating organisations, international partner organisations and EWMA associated organisations. The widest-ranging level of collaboration exists with the cooperating organisations (53 to date) which, through the annual cooperating organisation’s board meeting, are entitled to present and elect members of the EWMA Council as well as to other specific benefits. In addition, as an umbrella organisation EWMA recognises and benefits from the experiences of other wound healing associations and societies across Europe and beyond. This reduces duplication of effort and facilitates the sharing of best practice in terms of education, research and practice development.

It also provides a repository of information and evidence for those associations and societies that as newly formed or those that have not yet established wide networks (the exponentially weighted moving average principle!). EWMA connects associations and societies so that they too can continue to grow and flourish.

ACHIEVEMENTS SO FAR
It has been a busy few years; EWMA has grown and thrived, morphing from a single entity to an umbrella association, thereby creating networking opportunities and a venue for the sharing of experiences across associations and societies. It has changed and adapted to suit the needs of patients, carers and the public as well as health care professionals.
EWMA’s Patient Outcome Group (POG) has been influential in informing the design and conduct of high quality research. The initial focus of this group was to highlight the importance of acknowledging which outcome is defined as the primary endpoint of a study, and to support the general recognition of alternative outcome measures to complete healing in the evaluation of healing interventions. This work has changed the mindset of many researchers. Their work has been much debated, critiqued and published.

Other significant activities include:

- Standardising education with EWMA module outlines
- The introduction of a specific programme for students at the EWMA conferences (The EWMA University Conference Model, UCM)
- Raising political awareness for politicians and policy makers across Europe
- Collaborating with industry to develop new evidence-based technologies and initiating new developments in the organisation of, and research into, wound healing
- The cooperation of European practitioners has resulted in more consistency in understanding, education and treatment in the discipline. Internationally, educational programs and wound centre endorsements has been undertaken in China, Singapore, Brazil and many other places
- Council members have met with Members of the European Parliament (MEPs) and relevant patient organisations. The aim of these meetings was to create awareness among members of the European Parliament about the challenges related providing high quality wound management, as well as the importance of paying attention to health economics and patient quality of life. Among other things, EWMA has contributed actively to initiatives supported by the European commission on patient safety and antibiotic resistance.

STATE OF THE ASSOCIATION AT 25 YEARS OLD

EWMA continues to improve European wound patients’ quality of life by identifying, pursuing and advocating the highest quality, cost-effective multi-disciplinary treatment. EWMA’s goals remain fluid and responsive to its membership and patients – new ones replace those achieved. At present, these are:

- To be the overarching ‘umbrella’ organisation under which European wound healing associations collaborate
- To support patients to play a key role in prevention and their own treatment as a central member of the multi-disciplinary treatment team
- To provide highly accessible educational resources for citizens, patients and professionals
- To promote wounds as one of the major challenges for the quality of life of citizens as well as a major contributor to the economic burden of European health care systems
- To actively promote to governments and other decision makers that wounds are preventable by implementation of adequate prevention measures
- To promote the delivery of cost-effective, evidence-based best practice wound prevention and wound treatment
- To promote a multidisciplinary approach to the prevention and treatment of wounds.

EWMA works towards the fulfilment of these goals through:

- EWMA documents on epidemiology, pathology, diagnosis, prevention and management of wounds of
Hosting of multidisciplinary wound conferences and training courses in Europe

Creation of forums for networking and sharing of experiences for individuals and organisations actively involved in wound management

Advocacy activities targeting policy-makers and key-opinion leaders in national governments and the European Union

Providing guidance for practice

Thus, EWMA strives to be the organisation that citizens, patients, professionals, Governments, Health Services and educational institutes come to for advice, expertise and opinion in Europe.

THE NEXT QUARTER CENTURY - PLAIN SAILING?

Setting up and developing such an organisation is not without its challenges - the first 24 years are the worst…!

While the organisation has gone through its ‘storming, forming and norming’ phases, much is left to achieve. Further goals include:

- Raising the profile of wounds across Europe so that policy makers better understand the implications of poor wound care and the value of appropriate wound care
- Anticipating types of wounds that will be the most challenging in terms of clinical management and health care costs in all European countries – diabetic foot ulcers and cellulitis for example. Consideration must also be given to the effects that the ageing population has on the European health care systems
- Standardising and setting standards for multi disciplinary teams in wound care, and to ensure a safe and effective service for patients with wounds across Europe
- Continuing support for cooperating organisations, in particular increasing focus on how dialogue and sharing of knowledge can be increased across local, national and European levels
- Maintaining and updating EWMA documents, and ensuring that we select new document topics based on the greatest need of our membership, patients and their carers
- Continuing to develop a constructive and balanced dialogue with all stakeholders, including industry supporters
- Encouraging increased demonstration of the outcomes of wound care services
- Ensuring equal levels of knowledge across all countries (for example, on use of compression)
- Continuing to advocate for improved clinical practices while also taking into consideration the overall need of society for cost-effective solutions Clearly, there is still much to do!

However, EWMA council believes that with the support of its members and the structures they have in place, these will be achieved before the gold anniversary.

CONCLUSION

EWMA now has an extended collaboration with AAWC and Wounds Australia (previously the Australian Wound Management Association, AWMA), including an exchange of seats in the respective councils of the associations. This extended collaboration represents a further strengthening and formalisation if EWMA’s long standing collaboration and knowledge sharing with these international partners. More importantly, it ‘squares the circle’; the founding members asked if EWMA could replicate the AAWC model could be across Europe – 25 years later, the answer is ‘yes’.

We’ll leave the closing remarks to Christina Lindholm: “EWMA started its early conferences- and a new world opened up for us. The position documents and other consensus documents were developed, and I personally think that these have been the most important assets of EWMA, parallel to the conferences. I personally would like to wish EWMA- and all the people working for it, a successful celebration of its 25 years. The early pioneership and deep friendship we developed over the years is a true source of joy for me personally.”
Pssst! A secret event, watch this space...

There are several reasons to keep an eye on Smith & Nephew’s programme at the WUWHS 2016 conference…

• You want to learn more about pressure ulcer prevention.
• You want to witness the launch of the expert panel consensus document on surgical incision management.
• You want to hear the latest recommendations on biofilm treatment from the experts.
• We will keep you posted and give you access to our scientific content, even if you cannot be there.
• Did we mention a secret event? Watch this space…

In order not to miss the latest news, visit: www.smith-nephew.com/WUWHS2016 and register to be kept posted.
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and register to be kept posted.
The 26th conference of European Wound Management Association, the 10th Deutscher Wundkongress and 2nd WundD-A-CH Kongress 2016 will be a great event in many ways. The scientific programme has expanded significantly and will consist of various key sessions, workshops, lectures, full-day streams, and satellite symposia. It will involve scientists from Europe and other countries in the world. The 2016 conference is organised in cooperation with the Initiative Chronische Wunden e.V.(ICW) and the collaboration of German-speaking wound associations WundD-A-CH.

The conference offers more than 1,000 scientific presentations by international key speakers, free paper presenters, poster presenters, workshop facilitators, and satellite symposium speakers. A very large number of participants are expected, and the exhibition is the largest in the history of EWMA.

The conference theme is:

PATIENTS · WOUNDS · RIGHTS

The patient is more than a person with a wound. He/she is a human being with needs and requirements; and rights! According to the international declaration of human rights, everyone has the right to health, implying that prevention and treatment of non-healing wounds must be available to everyone. Thus, securing patients’ Quality of Life is a political responsibility as well as a clinical one. Patients’ access to wound care requires the collaboration of patients, professionals and policy makers. It is a cornerstone of good practice in wound management and a fundamental objective of the interdisciplinary team approach.

The 2016 programme will offer guest sessions from several organisations that are active in thematic issues related to wound healing and management. The organisations include Dystrophic Epidermolysis Bullosa Research Association(DeBRA), European Burns Association(EBA), The European Council of Enterostomal Therapy(ECET), European Federation of National Associations of Orthopaedics and Traumatology(EFORT), European Pressure Ulcer Advisory Panel(EPUAP), The European Society for Clinical Nutrition and Metabolism(ESPEN), European Society of Plastic, Reconstructive and Aesthetic Surgery(ESPRA), European Society for Vascular Surgery(ESVS), European Tissue Repair Society(ETRS), International Compression Club(ICC), International Lymphoedema Framework(ILE) and World Alliance for Wound & Lymphedema Care(WAWLC).
An International Partner Session will be hosted by ‘EWMA’s Australian partner, Wounds Australia.

**EWMA AND GERMAN WOUND CONGRESS ANNIVERSARIES**

At this year’s EWMA conference we celebrate EWMA’s 25th anniversary as well as the 10th anniversary of the German Wound Congress. EWMA’s anniversary will be celebrated throughout the year, and in particular at the conference in Bremen with a number of activities highlighting important milestones of EWMA.

**PROGRAMME HIGHLIGHTS**

**Key sessions**

The topics highlighted at EWMA 2016 cover the advancement of research in relation to epidemiology, pathology, diagnosis, prevention and wound management. Additional guest sessions will be held to discuss wound healing and management, and promote cooperation and networking.

**KEY SESSIONS INCLUDE:**

- Patients. Wounds. Rights. (Opening plenary key session)
- New technologies in wound care
- Migration, culture and ethnic skin
- Adipositas and wounds
- Biofilm: From laboratory to clinical practice
- Evidence and outcome
- Opportunities for tissue engineering in wound care
- Management of patients with venous leg ulcers: current best practice
- Use of oxygen therapies in wound care
- Health-related quality of life: the patient’s perspective
- Negative pressure wound therapy
- Networking structures in wound care
- Individualised wound diagnostics
- Local wound infection
- Compression therapy

**Workshops**

EWMA 2016 will also run a variety of interactive workshops, giving participants an opportunity to address and elaborate on particular aspects of the session themes.

**WORKSHOPS INCLUDE:**

- Wound assessment
- Diabetic foot: assessments, offloading and footwear
- Clinical trials: are they worth performing in the diabetic foot? What is the recent evidence?
- Skin care in leg ulcers
- Pros and cons of in-vitro and in-vivo model systems to study biofilm infections
- Debridement
- Military wounds
- Electrostimulation
- Pain management in patients with wounds
- Cochrane
- Wound centres and wound centre endorsements
- Economic downsizing: the importance of organisation to ensure adequate care for chronic wound patients
- How we do that: practical approach to clinical practice
- How to write an abstract and how to make an e-poster
- Getting published
- Cooperating organisations

EWMA focus sessions – on phlebology, revascularisation, diabetic foot and antimicrobial stewardship – foster more in-depth discussions than the workshops allow. A number of abstracts will also be presented in high-level free paper sessions, and as e-posters on display throughout the event.

Stay informed by visiting the conference website, www.ewma2016.org to see registration opportunities or obtain further information about the programme. You can also get your updates on EWMA’s social media platforms.
A difficult challenge requires an elegant solution.

**BeneHold® TASA®** Wound Dressing gives tough wounds freedom to heal

A burn can be a difficult wound to treat, requiring a dressing that can comfortably stay in place for numerous days, and is atraumatic to remove. With BeneHold TASA, our Thin Absorbent Skin Adhesive, that is exactly what you get.

**Join us at our symposium on Thursday, May 12, 15:45-16:45 in the London room to learn more about BeneHold TASA.**

"Creating a Window - Thin Absorbent Skin Adhesive Dressing in Pre- and Post-operative Wound Care in Partial Thickness Burns."

**Speaker:** Gabriela K. Muschitz, MD, PhD  
Division of Plastic and Reconstructive Surgery  
Department of Surgery, Medical University Vienna

**Chair:** Marco Romanelli, MD, PhD  
Associate Professor of Dermatology  
School of Medicine University of Pisa  
President Elect, World Union of Wound Healing Societies
INTRODUCTION & AIM OF THE DOCUMENT

It is well documented that the prevalence of venous leg ulcers (VLUs) is increasing, coinciding with an ageing population. Accurate global prevalence of venous leg ulcers is difficult to estimate due to the range of methodologies used in studies and accuracy of reporting. Venous ulceration is the most common type of leg ulceration and a significant health problem, affecting approximately 1% of the population and 3% of people over 80 years of age in westernised countries. Moreover, the global prevalence of VLUs is predicted to escalate dramatically, as people are living longer, often with multiple comorbidities.

Despite the fact that an abundance of guidelines for management of patients with venous leg ulcers (VLUs) are available and regularly updated, there is still variation and quality in the services offered to patients with a VLU. There are also variations in the evidence and some recommendations contradict each other, often causing confusion and a barrier to implementation. Finally, the difference in health care organisational structures, management support and the responsibility of VLU management can vary across countries, often causing confusion and a barrier to seeking treatment. These factors complicate the guideline implementation process which is generally known to be a challenge with many diseases.

EWMA and Wounds Australia have developed a consensus document, with the aim to highlight some of the barriers and facilitators related to implementation of VLU guidelines as well as providing clinical practice statements to overcome these and “fill the gaps” currently not covered by the majority of available guidelines.

METHODOLOGY

The development of the document includes:

- Recommendations reviewed from eight clinical practice guidelines (CPGs) published since 2010 which were compared for the purpose of this document. These are listed in table 1.

The full document is published as an online supplement in the Journal of Wound Care, April 2016. The document can be downloaded free of charge from the Journal of Wound Care website.
A study of relevant background literature on guideline implementation as well as different aspects of VLU assessment, diagnosis and management. A systematic review of the identified literature is outside the scope of this document.

The opinion of the expert working committee.

CLINICAL ADHERENCE TO GUIDELINES - BARRIERS AND FACILITATORS
Many approaches have been published offering potential solutions to barriers to guideline implementation, mostly in areas other than wound care. Substantial evidence suggests that behaviour change is possible, but this change generally requires comprehensive approaches at different levels (doctor, team practice, hospital, and health system environment), tailored to specific settings and target groups. Plans for change should be based on characteristics of the evidence or guideline itself and barriers and facilitators to change.12,13

A section of the document is dedicated to an outline of the potential barriers and facilitators for clinical practice guideline implementation related to the various players: The healthcare system/organisation, health care professionals and patients. The barriers and facilitators identified include both for CPG implementation and those specifically related to leg ulcer management guidelines.

CURRENT BEST PRACTICE LEG ULCER MANAGEMENT - CLINICAL PRACTICE STATEMENTS
The main focus of the document is to provide an overview for high quality service provision, with a key focus on the “good patient journey”. This section is divided into 5 chapters focusing on key elements of the patient journey:

- Assessment and differential diagnosis
- Treatment delivery: Compression therapy, dressings and invasive treatments
- Monitoring outcome

Table 1: Overview of the compared guidelines (sorted by publication year)

<table>
<thead>
<tr>
<th>No</th>
<th>Title</th>
<th>Organisation</th>
<th>Published /updated</th>
<th>Country/international collaboration</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Association for the Advancement of Wound Care (AAWC) venous ulcer guideline5</td>
<td>Association for the Advancement of Wound Care</td>
<td>(2005) 2010</td>
<td>USA</td>
</tr>
<tr>
<td>2</td>
<td>Management of chronic venous leg ulcers (SIGN CPG 120) (6)</td>
<td>SIGN (GB) - Scottish Intercollegiate Guidelines Network</td>
<td>2010</td>
<td>Scotland</td>
</tr>
<tr>
<td>3</td>
<td>Varicose ulcer (M16) (Varicose ulcer (NL: Ulcus cruris venosum))7</td>
<td>NHG (NL) - Dutch College of General Practitioners</td>
<td>2010</td>
<td>The Netherlands</td>
</tr>
<tr>
<td>4</td>
<td>Australian and New Zealand Clinical Practice Guideline for Prevention and Management of Venous Leg Ulcers1</td>
<td>Australian Wound Management Association and the New Zealand Wound Care Society</td>
<td>2011</td>
<td>Australia &amp; New Zealand</td>
</tr>
<tr>
<td>5</td>
<td>Guideline for management of wounds in patients with lower-extremity venous disease8</td>
<td>Wound, Ostomy, and Continence Nurses Society - Professional Association</td>
<td>(2005) 2011</td>
<td>USA</td>
</tr>
</tbody>
</table>
Referral structures

Secondary prevention

Each chapter concludes with a set of key clinical practice statements, which refer back to the comparison of evidence based VLU guidelines and the opinion of the expert committee (See Table 1). The clinical practice statements are provided in this summary. They are presented in their full context in the document.

ASSESSMENT AND DIFFERENTIAL DIAGNOSIS

Clinical Practice Statements:

Statement A: All patients presenting with lower leg ulceration must receive a comprehensive assessment.

Comments: This must include medical/surgical history; vascular assessment; laboratory investigations; leg ulcer history and symptoms; pain; mobility and function; psychosocial status; quality of life and examination of the leg and ulcer. A comprehensive clinical assessment and treatment plan must be developed and documented.

Basic assessment before initiation of treatment should include clinical assessment of the ulcer and leg as well as ruling out arterial disease by performing ABPI measurements.

Statement B: Patient assessment must be conducted by a health professional with appropriate clinical knowledge and skills who has the required qualifications, registration and licensing for the health system in which they practice.1, 6

Statement C: Following a comprehensive assessment, a recognised classification system (for example the CEAP Classification System) should be used to classify the extent of venous disease.

Statement D: A patient must be reassessed if the ulcer does not heal on the expected trajectory or when the patient's clinical or social status change.

Comments: Further assessment to exclude other underlying diseases must be performed after 3 months or if there is cause for concern prior to this.

Patients with a non-healing or atypical leg ulcer must be referred to a health professional trained and competent in the management of leg ulcers for further assessment and consideration of biopsy.1

Statement E: Bacterial swabs should not be taken routinely unless clinical signs of infection are present.1, 6, 14

TREATMENT DELIVERY

Compression therapy

Clinical Practice Statements:

Statement A: Compression therapy is recommended over no compression in patients with a venous leg ulcer to promote venous leg ulcer healing.1, 5-11

Comment: We have a great number of studies comparing compression with no compression therapy and confirming that VLUs heal more quickly with compression therapy.15-18

Statement B: In patients with a venous leg ulcer strong compression pressure over low compression pressure is recommended to increase venous leg ulcer healing.1, 6, 8, 9

Comment: There is evidence that a strong compression (higher that 40 mm Hg) is more effective than a low compression pressure (≤ 20 mm Hg) in promoting ulcer healing.15, 19-22

Compression should be applied by means of a multicomponent system, which increases pressure and stiffness rather than single component bandages.23-25 Adjustable Velcro® compression devices or elastic kits may be considered effective alternatives especially when trained personnel are unavailable.5, 21, 26

Statement C: In patients with venous leg ulcers we suggest using intermittent pneumatic compression (IPC) when other compression options are not available or cannot be used. When possible we suggest using IPC in addition to standard compression.9, 10, 27

Comment: There is evidence that compared with no compression, IPC is able to increase the VLU healing rate.28, 29 There is also limited evidence that IPC might improve healing of venous ulcers when used in addition to standard compression.30

Statement D: In patients with venous leg ulcers and arterial impairment (mixed ulcers) we suggest applying a modified compression in patients with less severe arterial disease: ankle brachial pressure index [ABPI] >0.5 or absolute ankle pressure >60 mmHg.10 This should only be applied by a trained HCP in mixed ulcer management and where the patient can be monitored. We have enough data that in patients with arterial impairment compression may be applied with reduced pressure provided arterial impairment is not severe.31-36 When ar-terial impairment is moderate (ABPI > 0.5) a modified, reduced compression pressure does not impede the arterial inflow37, 38 and may favour ulcer healing.39 Compression must be avoided in severe, critical, limb ischemia.10, 40
Statement E: In patients with a healed venous leg ulcer, compression therapy is recommended to decrease the risk of ulcer recurrence.10

Comment: even if available trials have some flaws, the evidence regarding the effectiveness of compression by stockings in ulcer recurrence prevention is strong. Some evidence is in favour of the strongest possible compression, which seems directly related to the effectiveness in ulcer recurrence prevention.41-43 A recent paper underlines the compliance of the patients wearing elastic stockings, which seems even more important than pressure itself.44

THE ROLE OF DRESSINGS IN VLU MANAGEMENT

Clinical Practice Statements

Statement F: No specific dressing product is superior for reducing healing times in VLUs.1 Simple non-adherent dressings are recommended in the management of VLUs.6 This applies to the majority of small and non-complicated VLUs.

Dressings are selected based on assessment of the stage of the ulcer bed, cost, access to dressing and patient and HCP preference.1, 8,10

Comment: If the VLU is exudating heavily, select a dressing that has a high absorptive capacity that can also protect the periwound from maceration.

Statement G: Concerning management of the surrounding skin, the HCP can consider using topical barrier preparations to reduce erythema and maceration from VLUs. Venous eczema can be treated with short term topical steroids, zinc impregnated bandages, or other dermatological preparations.6,1

Statement H: Concerning use of wound dressings in the case of clinical infection, a comprehensive assessment of the patient and their VLU is required to determine the severity of the infection and appropriate treatment implemented. Antimicrobial therapy such as silver, honey and cadexomer iodine dressings can be prescribed when a VLU exhibits signs of infection.1,8-10

Comment: The use of topical antimicrobials should not be used in the standard care of VLUs with no clinical signs of infection.1, 8-10

Statement I: Concerning wound dressings and cost saving, the standard care of treating VLUs reduce the cost of ulcer management.1,8

Comment: we have sufficient evidence to support that ulcer dressings are effective in exudate management, in controlling ulcer infection and in allowing cost saving of ulcer management.45-51

Statement J: Ulcers characterised by an adequate wound bed but absent or slow healing may need a maintenance debridement of wound bed and peri-wound skin.52

INVASIVE TREATMENTS

Clinical Practice Statements

Statement I: To improve ulcer healing in patients with VLU and incompetent superficial veins, surgery (high ligation/stripping) or alternatively any new ablation techniques should be suggested in addition to standard compression therapy.10,27

Comment: Traditional surgery has slightly higher level of evidence than new ablative techniques, probably because they have not been sufficiently studied for this purpose. 53,54

Statement J: To prevent ulcer recurrence in patients with active or healed VLU and incompetent superficial veins, the surgery (high ligation/stripping) of incompetent veins in addition to standard compression therapy is recommended.10,11,27

Statement K: To prevent ulcer recurrence in patients with active or healed VLU and incompetent superficial veins, ablation technique in addition to standard compression therapy is suggested.6,9,10,27

Comment: Open surgery for prevention of ulcer recurrence when superficial veins are involved is the only well documented treatment.54-56 New ablative techniques still require more studies so this is why the evidence of using them is much lower.57,58

Statement L: To improve ulcer healing and to prevent recurrence in patients with VLU and incompetent superficial veins with pathologic perforating veins and with or without deep venous disease, surgery or ablation of superficial and perforating veins is suggested in addition to standard compression therapy.10,27

Comment: Every treatment of perforating veins is controversial, because of lack of well-designed RCTs and uncertainties whether abolition of axial reflux or closure of insufficient perforator is more beneficial for improving healing of leg ulcer.59-61

Statement M: To improve ulcer healing and to prevent recurrence in patients with active or healed VLU and iso-
lated pathologic perforating veins, surgery or alternative ablation technique of perforating veins is suggested in case of failure of standard compression therapy.10,27

Statement N: To close the pathologic perforator veins in patients with VLU, percutaneous techniques, which do not need incisions in the areas of compromised skin are recommended over open venous perforator surgery.10,27

Comment: Avoidance of any incision within a region of compromised skin is crucial, so this is why the minimally invasive techniques, from a ultrasound-guided foam sclerotherapy to SEPS should be taken into consideration when the treatment is planned.27

Statement O: In patients with infra-inguinal deep venous reflux and active or healed VLU the recommendation is against deep vein ligation of the femoral or popliteal veins as a routine treatment.10,27

Comment: This is an old surgical procedure which fortunately currently is rarely performed.52,63

Statement P: To improve ulcer healing and to prevent recurrence in patients with total occlusion or severe stenosis of inferior vena cava and/or iliac veins, venous angioplasty and stenting is recommended in addition to compression therapy.10,27

Statement Q: No specific debridement method has been documented to be optimal for treatment of venous leg ulcers.8

Comment: The most commonly used methods of debridement are surgical (sharp), conservative sharp, autolytic, larval, enzymatic and mechanical. Surgical debridement is rapid, although it requires either general or local anaesthetic and can be painful. Conservative sharp debridement is the removal of loose avascular tissue without pain or bleeding.1

Statement R: Mechanical debridement methods, such as ultrasound, high-pressure irrigation or wet to dry dressings, may be useful for reducing non-viable tissue, bacterial burden and inflammation.1

REFERRAL STRUCTURES

Clinical Practice Statements:
Statement A: Leg ulcer management must be undertaken by trained or specialised HCP.1,6-8

Comment: Individual patients and carers can, however, play a proactive role in self-care ulcer management including amongst other things changing of dressings and compression bandages/hosiery/wraps. The HCP should support the patient to enhance selfcare activities.

Statement B: Specialised leg ulcer clinics are recommended as the optimal service for treatment of VLU in the community (primary care) setting.6

Statement C: In rural areas, where specialised HCPs may not be available, telemedicine can offer an opportunity to provide specialised assistance for assessment, diagnosis and treatment of a VLU patient.64

SECONDARY PREVENTION

Statement A: When a VLU has healed, the patient requires lifelong medical grade compression hosiery providing 18 – 40mmHg to reduce the long term effects of venous disease.1,6

Statement B: The patient must be assessed by a trained health professional for suitability and strength of compression.1,6

Statement C: The patient should consider replacing compression hosiery every six – twelve months and/or per manufacturer’s recommendation.1

Statement D: The benefit of a daily skin care programme promotes the health of legs and reduces the risk of VLU recurrence.1,6

Statement E: Exercise and movement has a positive benefit for the patient and enhances calf muscle pump.1,65 Progressive resistance exercise has been shown to promote calf muscle function

Statement F: Elevation of the limbs when sitting and avoidance of standing for prolonged periods assists in controlling lower leg oedema.1,6

Statement G: Consider monitoring the patient for six - twelve months after the VLU has healed

MONITORING OUTCOME

This document chapter highlights the need to continuously audit the outcomes of VLU patient care. It is stated that study outcomes should apply to a single or small number of clearly defined objectives, including:

- A precise statement of the degree of benefit expected from the intervention, and its duration;
- Clear statements on the time frame of the study (especially in relation to how quickly the benefits might start);
A definition of the patients for whom the benefit is sought.56

Wide variations in endpoints of trials of VLU have been reported together with a lack of endpoints related to QoL or patient identified endpoints.57

CONCLUSION

It is well established that VLU prevalence is on the increase, more often in older adults, which will escalate the cost to the patient and healthcare organisations in the coming decades. More than ever there is a sub-stantial need for international consensus on prevention and management strategies of these chronic wounds, which is cost effective, with positive outcomes for the patient. There is a need for a multidisciplinary team approach of all healthcare professionals across different health sectors to work collaboratively in the future to reduce the development and recurrence of these wounds.

EWMA and Wounds Australia as expert bodies can lead the way in providing education and evidence-based publications on VLU management and ensure this chronic, debilitating, often slow-healing wound is kept on the agenda as an international health priority.

REFERENCES


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O2-TopiCare Wundsystem - Informationen und Anwendungserfolge - Dipl.-Ing. (FH) Margarete Özimek, OxyCare GmbH
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EWMA DOCUMENT:
USE OF OXYGEN THERAPIES IN WOUND CARE

Work on this document is now in progress. The author group chaired by Prof. Finn Gottrup and co-chaired by Prof. Joachim Dissemond met in Copenhagen on 1 March 2016 with the purpose of elaborating guiding principles for the document, as well as an overall outline of its content. Publication of the document is planned for Spring 2017. This initiative is covered in a key session at the EWMA 2016 Conference, to be held Friday 13 May from 13.45-15.15. The document is supported by unrestricted grants from AOTI, Inotec AMD and Sastomed.

*It is still possible for additional companies to support the document. Please contact the EWMA secretariat at jnk@ewma.org for further information.*

EWMA OUTLOOK DOCUMENT:
ADVANCED THERAPIES IN WOUND MANAGEMENT

The EWMA Council has decided to publish a document that will investigate and provide an outlook on the barriers and possibilities of advanced therapies in next generation wound management. Cellular therapies, tissue engineering and tissue substitutes are all techniques associated with the clinical discipline of regenerative medicine and will be covered here. Moreover, a focus on physical therapies and the potential of sensors and software will be included. The document will include literature review and expert opinion on where the opportunities lie ahead and call for research in recommended areas.

AUTHOR GROUP

EWMA Council member prof Alberto Piaggesi and EWMA President Dr Sevein Läuchli will be chairing and co-chairing the project. Other contributing authors will be confirmed soon. The work on this document will be initiated in 2016. Publication is planned for Spring 2018. For information about this project and opportunities to support it, please contact the EWMA secretariat at NFB@ewma.org.

EWMA DOCUMENT:
SURGICAL SITE INFECTION

The EWMA Council has decided to publish a document on the topic of surgical site infections (SSI). The document will address SSI in the hospital setting, and, in particular, in the home care and community care setting. This feeds into EWMA’s previous work on various aspects of wound-related patient safety, and links up with other recent and ongoing EWMA focus areas such as the antimicrobial stewardship programme, the NPWT document (planned for publication in Summer 2016), and the Home Care Wound Care document published in 2014.

EWMA aims to gather a broad interdisciplinary expert working committee to take responsibility for the development of this document. The work on this document is planned to be initiated before the end of 2016. Publication is planned for Spring 2018.

*For information about this project and opportunities to support it, please contact the EWMA secretariat at jnk@ewma.org.*
In autumn of 2015, EWMA carried out two pilot endorsements of wounds centres:

- The Wound Centre of the Peking University First Hospital in Beijing which is a hospital based centre.

- The Wound Clinic of the Sesc Health Center of Excellence, Belo Horizonte, Brazil which is a clinic based outside of a hospital setting.

Based on these experiences, EWMA will work toward developing an international wound centre endorsement programme in collaboration with its partner organisations. To learn more about EWMA’s endorsement programme and these experiences with the establishment of wound centres, join the EWMA 2016 workshop in Bremen, Thursday 12 May 2016 at 10.00-11.00. The development of the wound centre endorsement programme was supported by an unrestricted grant from the Coloplast Access to Health Care programme.

NEW PATIENT RESOURCES SECTION AT WWW.EWMA.ORG

The EWMA Patient Panel has developed a resource section for patients with non-healing wounds and their relatives or private carers. These pages include a Questions & Answers section with basic information about wound causes and diagnosis, lifestyle issues, treatment and prevention. The section also includes a glossary of words typically related to non-healing wounds and wound management and links to patient material developed and provided by other organisations.

EWMA hopes that cooperating organisations of EWMA that do not currently provide patient information will make use of this opportunity to translate and disseminate this online patient information developed by EWMA.

EWMA would be pleased to receive any kind of feedback on this patient resources section. Visit the new section at: www.ewma.org/resources/for-patients-and-relatives/

EWMA WOUND CENTRE ENDORSEMENTS

In autumn of 2015, EWMA carried out two pilot endorsements of wounds centres:

EWMA NEWS

EWMA JOURNAL 2016 vol 16 no 1

EWMA & COOPERATING ORGANISATIONS

1st ROUNDTABLE, KAUNAS, LITHUANIA, 15 APRIL 2016

In 2015, EWMA launched a new collaborative activity: “National wound care roundtables”. This initiative aims to support the organisation of a number of meetings on a national level, focusing on a previous or current EWMA focus topic. These meetings will be arranged in collaboration with the Cooperating Organisations of EWMA that wish to host a “wound care roundtable”. The 1st Roundtable was organised by the Lithuanian Wound Management Association (LWMA), and chaired by former EWMA Council member Prof. Rytis Rimdeika. This took place in the Lithuanian city of Kaunas on 15 April 2016. The key topic of the meeting and debate was “Organisation of Negative Pressure Wound Therapy (NPWT)”.

The EWMA Council was represented by Prof. Sue Bale and Dr. Edward Jude.

An article about this very first roundtable will be published in the October 2016 issue of the EWMA Journal. Meanwhile, all Cooperating Organisations are encouraged to express their interest in hosting a roundtable during 2017 and beyond.
EWMA's website www.ewma.org has undergone a full make-over to improve the users’ online experience when looking for wound information and resources. New features are available for both professionals and non-professionals.

EWMA has just launched its new website. The address www.ewma.org remains the same, but behind the URL is a whole new experience when it comes to finding wound-related content, whether you are a health professional or a citizen.

The new www.ewma.org is more than just a digital facelift. A lot of effort has gone into making the navigation on the site easier by re-arranging content, using more illustrations and adding new features. Also, the design is now responsive, which is a vast improvement for users of tablets and smartphones.

For visitors of EWMA Conferences, there is also change underway. Starting with the EWMA 2017 Conference in Amsterdam, the Conference's website will be incorporated into www.ewma.org, making the website the sole access point for all information concerning EWMA.

A brand new feature is a section for patients and relatives. Here, citizens with interest in wound care can find out about their rights as a wound patient, and find answers to many of their questions and explanations to the terms often used in wound management. This initiative is introduced by EWMA’s ‘Patient Panel’, which works to enhance EWMA’s engagement in patient rights and patient empowerment.

Educators in wound management will be pleased to have free access to EWMA’s education modules on the website. The education modules constitute a curricular framework for developing education programmes in various areas of wound management. Though the information is available without charge, it is strongly advised that the use of the education modules is followed by a review by EWMA’s Education Committee with the aim to obtain an endorsement of the education programme.

The website is continuously developing, and amongst other things EWMA aims to make more audio-visual content available to our users in the future. To support this, the site will soon include a new platform, the EWMA Conference knowledge centre, which will be the entrance point to all types of materials related to previous EWMA Conferences, such as abstracts, posters and recorded sessions. We hope that this will ensure the continued availability of all the important knowledge sharing that takes place during the EWMA conferences.

Should you have any recommendations for improvement or other feedback to the site, we will be very happy to hear from you. Send an e-mail to ewma@ewma.org
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**New document by EWMA and Wounds Australia:**

*Management of patients with venous leg ulcers – Challenges and best practice.*

Published April 2016

This document provides clinical practice statements addressing key aspects to consider when developing an evidence-based leg ulcer service that enhances the patient journey. The document also identifies barriers and facilitators in the implementation of best practice in the management of a VLU.

The document will be launched in a key session during the EWMA 2016 Conference: Wednesday 11 May 16.45-18.00

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**New EWMA document:**

*Negative pressure wound therapy – Overview, challenges and perspectives*

Will be published July 2016

This document provides an overview of the evidence base for the use of negative pressure wound therapy (NPWT) in wound treatment and covers all three types of NPWT: On open wounds, with instillation and over closed incisions. The document also focuses on the organisational and health economical aspects of NPWT.

The document will be launched in a key session during the EWMA 2016 Conference: Friday 13 May 8.00-9.30

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**Antimicrobial stewardship in wound management:**

*A BSAC/EWMA Position Paper*

Expected publication: Summer 2016

The aim of this position paper is to provide clinicians with an understanding of the importance of Antimicrobial stewardship (AMS) in the management of patients with infected wounds. The paper will also address who should be involved in AMS and how to conduct AMS in wound management.

The paper was initiated and developed in collaboration with the British Society for Antimicrobial Chemotherapy (BSAC).

The manuscript is currently in peer review.

The project will be presented in the BSAC/EWMA Symposium at the EWMA 2016 Conference Wednesday 11 May 2016, 13.45–16.40

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**Document on the use of oxygen therapies in wound healing**

Publications currently planned for 2017

In 2016-2017, EWMA will work on a document aiming to provide practice-oriented guidance on the use of various forms of oxygen therapies for wound treatment. This document will include an overview of treatment options available and an assessment of the best available evidence for use. In addition, the document will detail specific aspects and current discussions connected with the use of oxygen in wound healing.

Expected publication: Spring 2017

The topic and initiative is covered in a key session during the EWMA 2016 Conference: Friday 13 May 13.45-15.15
Australian Wound Management Association becomes Wounds Australia

The Australian Wound Management Association (AWMA) undertook a move to change by member resolution in 2015 from an association of geographically based wound management organisations to a single national peak body (Wounds Australia) representing all members of the previous associations. We are pleased to announce that Wounds Australia came into action in November 2015.

With the nationalisation of AWMA into a new entity, Wounds Australia has a new logo as well as a new look to our website. Wounds Australia is poised to provide more benefits to its members, and act as the peak organisation in Australia for wound management.

Wounds Australia has inducted a Board of Directors who are busy developing a new organisational structure and strategic direction. In the medium term, Wounds Australia will also be seeking to strengthen its strategic operations and business functions through the recruitment of a CEO. We are re-shaping our education, research and membership committees into national portfolios and engaging members to participate in developing member-driven strategic direction through these portfolios.

The Wounds Australia board has identified that increasing the number of education scholarships/grants available to members is an early member benefit action it can undertake. This gives members the opportunity to access more education and training in wound management than previously offered.

Wounds Australia continues with a range of projects underway either in development, completion or review phases. International projects, in conjunction with our project partners, include the Pressure Injury and the Venous Leg Ulcer Guidelines. Nationally, projects include the Aseptic Technique Guidelines and our major health promotion project “Wounds Awareness Week” in collaboration with the Wound Management Innovation CRC. Local branches of Wounds Australia continue to hold education events and host webinars on wound practice upskilling.

The Australian Journal of Wound Management “Wound Practice and Research” continues to be produced and published by Wounds Australia four times a year along with the newsletter ‘DeepesTissues’ and these are valuable resources for evidence based practice.

We have an exciting year ahead of us, as it is national conference year for Wounds Australia. The conference is being held in Melbourne 9-12th November. Registration is open and filling quickly. We look forward to welcoming any EWMA members who are attending.

OBITUARY NOTICE

Sandy Dean, Fellow of Wounds Australia, Past National Wounds Australia Nursing Representative and Past President of Wounds Australia, Victoria.

On the 22nd April 2015 Wounds Australia lost one of our vibrant long term members who was largely recognised for making a difference in wound management and ultimately for people that suffered wounds.

She was an Australian leader in establishing one of the first multidisciplinary wound clinics - the Caulfield Wound Clinic - which she ran for close to 30 years. One of Sandy’s legacies is her incredible work in pressure injury prevention. She was recognised as expert in hospital mattresses and changed practice in hospitals nationally.

She will be profoundly missed and always fondly remembered. Her knowledge and commitment to improving wound management practice will live on through all those that she has taught, touched and inspired over her many years in our specialty.
AAWC NEWS

Dear EWMA Colleagues,

Reflecting over my two-year term as AAWC President, I feel honoured to update EWMA about the accomplishments of our diverse, professional association! As the leading interdisciplinary association for wound healing in the United States, we have had tremendous success; therefore, I proudly step into the revered Past President position while taking with me many triumphant memories and plan to stay heavily involved.

AAWC’s latest accomplishments are a testament to the progressive approach of dedicated members and include the launch of a state-of-the-art AAWC website and Career Center, release of popular educational brochures, and enhancement of the revered Education for the Generalist program.

Giving back to members is of paramount importance at AAWC. Our programmes offer exclusive membership benefits; provide travel grant support to those who volunteer overseas; award scholarships to members for teaching, learning and exchange programmes; and reward those who contribute our organisation.

Of great importance, AAWC brings a united voice to United States government and public policy issues. For example, AAWC remains the host society, along with Wound Healing Society, as co-host for an initiative entitled, “Wound-care Experts/FDA – Clinical Endpoints Project (WEF-CEP)”. Since complete closure is the only endpoint the FDA recognises in determining device and drug approvals, our teams are developing clinical endpoints that are meaningful to our patients. WEF-CEP aims to define scientifically rigorous, yet achievable, clinical endpoints in wound healing for consideration by the FDA. We have more to do; however, we are steadily headed to the finish line of this truly remarkable journey.

AAWC collaborates with national and international societies, such as with the consolidation of clinical guidelines. While each wound care association involved continues to advance its own mission for our field, I have the vision that one day there will be one set of resources supported by tens of thousands of multidisciplinary, collaborative, professional organisation members.

With a focus on education, AAWC is an integral part of SAWC Spring and SAWC Fall - the premier wound care conferences in the United States. In the spring, AAWC hosts a clinical practice track that provides evidence-based, patient-centred, interdisciplinary, practical information that can easily be shared with decision makers and colleagues soon after the conference. AAWC heavily participates in SAWC Fall planning and hosts several events at that venue annually as well.

In summary, I am proud of the cohesiveness and success of AAWC. Together, we have fought for positive change in the wound healing community. As I “pass the gavel” to incoming AAWC President Dr. Greg Bohn, I am honoured to have represented AAWC by advocating for and being a needed voice for improving patient care. An astute leader, Dr. Bohn will continue to reinforce AAWC’s position in the world.

Join AAWC and our mission to advance the care of people with and at risk for wounds. Please contact any board member or the office at any time; we are always happy to hear your suggestions. Visit our website to learn more about getting involved: http://aawconline.org.

Yours truly,

Dr. Vickie R. Driver
President, AAWC

Vickie R. Driver
President of AAWC

ABOUT AAWC
As the leading interprofessional organisation in the United States dedicated to advancing the care of people with and at risk for wounds, AAWC provides a whole year of valuable benefits! Be sure to join us for near daily updates and alerts on Facebook and LinkedIn.
Als Forum für die europäische phlebologische Wissenschaft widmet sich die CME-zertifizierte Zeitschrift allen relevanten phlebologischen Themen in Forschung und Praxis: Neue diagnostische Verfahren, präventivmedizinische Fragen sowie therapeutische Maßnahmen werden in Original- und Übersichtsarbeiten diskutiert.


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world allianCe for Wound and Lymphoedema Care (WAWLC) Update

The World Alliance for Wound and Lymphoedema Care (WAWLC) celebrated its annual general meeting in Geneva 13-14 November 2015. For a general update on WAWLC activities to advance sustainable prevention and care of wounds & lymphoedema resource-limited settings please refer to the overview published in the EWMA Journal Vol.15 No 2 October 2015.

At the EWMA 2016 conference 11-13 May in Bremen, Germany WAWLC will host a session on Thursday 12 May 8.00-9.30 with the following tentative agenda:

Title: Update on principal WAWLC activities in resource-limited settings
Chairs: David Keast, Hubert Vuagnat

Presentations:
- Presentation of the Burden of Illness-study in Brazil, China, India (Hubert Vuagnat)
- Report on the test of the WAWLC standard wound kit for use in resource-poor settings (Eric Comte)
- Reflections on lessons learned from wound care training and education in Cameroon (Dr. Franck Wanda, Cameroon)
- Update of other WAWLC activities.
- Questions and debate

ABOUT WAWLC
WAWLC started as a working group in 2007 and was officially launched as a global partnership in 2009. Read more about WAWLC and current projects on the website: www.wawlc.org.
The above event was held in accordance with the basic aims of the CWA which are: education of medical personnel in the multidisciplinary approach to the prevention of the chronic wound, targeted treatment and care, improvement and standardisation of methods and procedures and promotion of up-to-date knowledge about the chronic wound.

In order to reach our determined goals we decided to carry out education by means of symposia which are regularly held every year since the founding of the Association in 2007 until the present day.

Along with the above, we regularly update our website with practical instructions for clinical practice, procedures, standard methods, novelties. The website is accessible to all who are interested in issues related to the chronic wound. These are primarily the members of the CWA, followed by medical personnel of varied profile and, last but not least – the patients themselves.

In striving to promote knowledge about chronic wounds, an optional subject was introduced into the curricula of the Medical High School and institutions of higher education. For this purpose a handbook “Chronic Wounds” (in Croatian) written by D. Huljev, MD, PhD was published.

In the structure of our symposia we always have one main topic, so that we systematically cover the issues related to chronic wounds with a special stress on clinical practice or family medicine. Therefore, the history of our symposia covers the following topics: decubitus, lower leg ulcer, diabetic foot, atypical wounds, chronic wounds – local treatment – a challenge for the clinicians, chronic wounds – accents in prevention and treatment, chronic wounds between theory and practice.

In 2015 we organised the 8th Symposium with international participation, entitled: Chronic Wounds – Management in Primary Health Care. The Symposium was held in the Tuhelj Spa on 22nd and 23rd October 2015. The main goal of this Symposium was to bring together physicians from primary health care, because we noticed a large gap in the knowledge and handling of chronic wounds. Considering the fact that a properly educated family physician is the pillar of healthcare and treatment, including the treatment of patients with chronic wounds, we gave special attention to this subject.

The Symposium consisted of several major and several minor topics.

The first topic was lymphoedema which was covered by key experts from Slovenia and Croatia. Special attention was roused by the presentation on lymphoedema following breast cancer surgery, which was concluded with practical guidelines for women. We also had a lively discussion on the topic of lymph drainage in positive primary loci.

The second topic, under the title “Chronic wound in practice” consisted of case presentations and results of follow-up. For the first time we heard the results of monitoring the duration of treatment of chronic wounds on the level of family medicine in Zagreb. On the basis of well analysed epidemiological data, the authors of this presentation pointed out clearly defined problems, among which a correct and timely application of compression therapy is predominant. The second presentation dealt with the results of monitoring the application of compression therapy by family physicians with the conclusion that compression therapy must be carried out also as prophylaxis, the precondition being a precise diagnosis of lower leg ulcer. The authors concluded that ulcus cruris is not a diagnosis of disease.

We heard a very interesting presentation about the analysis of initial knowledge of nurses about chronic wounds which showed a mediocre theoretical knowledge and an insufficient practical one. We also heard interesting presentations about the problems of treating chronic wounds from the perspective of family physicians, surgical treatment of avulsion wound of the lower leg, the patient’s knowledge about foot, skin and nail care.

The conclusion was that more effort should be directed at collecting relevant data at family medicine level, which would point out the outstanding issues and enable their relevant solutions.
In addition, the need was seen for more printed material in the form of guidelines, algorithms and recommendations applicable in day-to-day clinical practice.

In response to the needs, we are working intensively on the drafting of guidelines about the prevention and treatment of decubitus, which would be accepted by consensus as national guidelines. This work is co-ordinated by the CWA.

The third block of presentations consisted of invited lectures of leading experts from Croatia and Serbia on the following topics: pathophysiology of wound healing, pain and suppression of pain, antiseptics – facts and errors, skin substitutes, possibilities of debridement in the family physician’s clinic, the value of carboxytherapy, the problem of peripheral ischaemia in primary medicine, along with a skin doctor’s review of the treatment of chronic wound in a community setting.

There was a lively debate and a number of proposals were put forth. We concluded that work with patients suffering from chronic wounds must be intensified, made more professional and that outpatient and hospital sectors must be more closely related in the area of chronic wound management.

The fourth block consisted of workshops on compression therapy. The participants at the Symposium stated that workshops were the most useful form of education from the point of view of everyday clinical practice. They appealed to the organisers to increase the number of hours dedicated to practical work in the next symposium. It is interesting to note that nearly all participants took part in the workshops, both participants and lecturers. The exchange of knowledge and experience yielded high quality education and provided many practical answers.

The last block of lectures was allocated to representatives of companies in order to give them the opportunity to present novelties in their production in front of a relevant body of participants. They were encouraged to present these novelties in the management of chronic wounds without advertising slogans and adjectives such as “the best”, “of highest quality”, “unique” and the like, which is usually the case in commercial presentation of products.

The guidelines on prevention and treatment of decubitus drafted by the Croatian Wound Association were distributed to a certain number of healthcare professionals in order to gather their feedback. This is necessary in order to formulate a final version, accepted by consensus, and present it to a broader medical audience for endorsement.

The 8th Symposium “Chronic Wounds – Management in Primary Health Care” gathered 230 participants and 32 lecturers and it fully justified the aims intended by the organisers. All the lectures were printed in the journal AMC 2015; 69 (Suppl. 1): 1 – 136 and they represent a permanent theoretical source of knowledge on this subject.

The chapter on lymphoedema showed that there are a number of theoretical subjects which deserve further attention, and examples from clinical practice pointed to a number of problems that can be resolved, as well as connecting the primary and tertiary healthcare in a more effective way in the area of chronic wound management.

The workshops proved once again the necessity of a targeted and supervised clinical practice, which can be carried out only by educated professionals in this field.

Theoretical lectures provided us with a number of novelties and changes, and informed us of studies that were carried out in the past ten-year period, which changed the clinical practice. This primarily relates to the issues of disinfectants and biofilm, substitutes and alternative forms of treatment of skin defects, suppression of pain and the value of new supportive therapeutic procedures.
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- Median time to closure was 42 days compared to 70 days for the control group \((n=97, p=0.019)\)
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New impulses for the care of burn patients

Attracting more than 880 participants, the 16th “European Burns Association Congress” in Hannover has been a big success. The international congress was organised by the “European Burns Association” (EBA) in cooperation with the German Society for Burn Medicine (DGV).

For four days, renowned experts from European and Intercontinental countries exchanged latest information in the treatment of burns.

Besides current issues in practice, the conference’s focal points were on practice guideline-based therapy, quality assurance and the accreditation of burn injury centres in Germany and Europe.

A special highlight of the congress was the lecture of the Italian plastic surgeon and burn specialist Prof. Dr. Michele Masellis from Palermo, Italy who has been honoured with the Rudi Hermans Lecture. For more than 30 years he has been working to improve burn medicine in southern Europe and the Orient, doing important work for the therapy, especially in the Mediterranean region and in developing countries. By establishing modern standards at conferences, seminars and in surgical operations, he had a major impact improving the care of patients affected by severe burn injuries.

“The EBA maintains a close collaboration with the Euro-Mediterranean Burn Council, founded by Professor Masellis” says congress president Prof. Dr. Peter M. Vogt, chairman of the EBA, director of the Clinic for Plastic, Aesthetic, Hand and Reconstructive Surgery at the Medical University of Hannover and director of the Severe Burn Injuries Centre Lower Saxony. “Europe has grown closer together, also on a burn medicine point of view.”

In the area of acute care, a focus was on the new method of so-called enzymatic debridement, a removal of eschar by an enzyme that is applied from the outside on the wound and that favourably influences the healing process at an early stage. In addition, skin replacements with biomaterials and new methods that preserve the epidermis through cell sprays and achieve significant improvements were presented at the congress. Particularly impressive were the microsurgical plastic restoration techniques and the results of face transplant which were presented from Prof. Juan Barret from Barcelona, one of the leading global experts.

An important focus were infections in burns, scars and paediatric burns - still the leading cause of death despite advanced medical facilities, despite the maintaining of highest hygienic standards and the targeted use of antibiotics. Another focus was on the progress in the treatment of scars - by microneedle therapy, laser and mechanical processes. “These advances are important especially for kids as they are hampered in growth by scars and have to live their whole life with physical and mental consequences,” said Professor Vogt.

All information can be found under www.eba2015.de.

The 17th “European Burns Association Congress” will take place from 6 - 9 September 2017 in Barcelona.
INTRODUCTION:
In February 2015, Mr. Ljubisa Paden (RN, Slovenia) was awarded a EWMA Travel Grant by the EWMA Executive Committee. The following report is his account of the impressions and learning outcomes from his visit to The School of Nursing, Midwifery and Social Work at The University of Manchester.

EWMA provides travel grants to young practitioners who wish to develop their skills within wound care and wound management abroad. The travel grants will primarily be given for educational purposes or clinical experiences outside the applicants’ own countries.

You can find more information about the EWMA Travel Grant and how to apply at www.ewma.org.

In September 2015 I visited The School of Nursing, Midwifery and Social Work at The University of Manchester, where I had the opportunity to be part of the Wounds Research Group. The School of Nursing, Midwifery and Social Work runs several different research projects in wound care, and also houses the Editorial Unit of Cochrane Wounds (one of the review groups of the Cochrane Collaboration). This enabled me to encounter many different types of research, clinical practice and networking opportunities.

The main learning objectives were to improve my research skills and therefore I was engaged with various research tasks. I strengthened my knowledge and skills in research design, especially in designing prevalence studies and qualitative studies related to wound research. I improved my skills in critical appraisal and evidence synthesis. Another important focus of my visit was oriented towards exploring ethical issues related to wound research. I had the opportunity to discuss my PhD project with several researchers. The project will explore the prevalence and lived experience of people with surgical wounds healing by secondary intention. Furthermore this travel was also oriented toward improving my personal effectiveness and therefore I have improved my language skills, presentation skills and communication with different stakeholders. Moreover I had an opportunity to be present at many meetings of different wound-related research projects groups where I had chance to observe how the projects are lead, time management of projects, and how to manage different tasks in research projects.

During this study tour I also visited three clinical placements in order to become acquainted with the management of complex wounds in the United Kingdom. Two of the clinical settings were in the community, and I also visited a university hospital. In the leg ulcer clinics I gained an insight into the organisational aspect of nurse-led clinics, and furthermore I observed tissue viability nurses and district nurses in a wound management context. I was impressed by their broad knowledge and professional competencies in decision making, which differ quite significantly from those in Slovenia. I also visited the Tissue Viability/Infection Control Services at Central Manchester University Hospitals NHS Foundation Trust, where I became acquainted with the specialist tissue viability services which are provided in hospital wards and in out-patient clinics.

I had many opportunities to discuss wound care with various healthcare professionals who provide direct or indirect wound care, such as staff nurses, ward managers, advanced nurse practitioners, nursing specialists, cardio-thoracic surgeons and microbiologists. All these professionals briefly described how they are connected with wound care and wound research. Furthermore they were all happy to answer my questions related to my research project.

This study tour has also widened my professional network, as I had many opportunities to connect with practitioners and researchers in wound care across academia and health care services, specifically the NHS.

This travel grant will help me translate and introduce new theoretical knowledge, good practices and research methods not only to my teaching colleagues in Slovenia but also to students, researchers and professionals in clinical practice. Furthermore I hope that this training will eventually have an important impact on the development of higher quality wounds research and improve the translation of research evidence...
The School of Nursing, Midwifery and Social Work at The University of Manchester, UK

into clinical practice in Slovenia and beyond.
I would like to express my thanks to EWMA, who awarded me a travel grant; to the Department of Nursing, Faculty of Health Sciences, University of Ljubljana, who supported this travel; to Professor Dame Nicky Cullum who hosted me at the School of Nursing, Midwifery and Social Work, The University of Manchester, and to all the practitioners and researchers who were involved in my training.

2nd International Congress Fellows in Science and the 10th National Croatian Congress of Plastic, Reconstructive and Aesthetic Surgery

Dubrovnik, Croatia, was the venue of the 2nd International Congress Fellows in Science and the 10th National Croatian Congress of plastic, reconstructive and aesthetic surgery from 1-4 October 2015. The conference was recognised and appointed by the European Society of plastic, reconstructive and aesthetic surgery (ESPRAS) with whom EWMA has an agreement of exchange of presentations at our respective conferences.

Fellows in Science is a place of gathering of experts in the field of plastic, reconstructive and cosmetic surgery, as well as other specialists, who exchange experiences, skills and knowledge.

The Congress was attended by the most respected experts from Croatia and 40 highly distinguished speakers from Europe, USA and Asia. Conference topics covered all areas of plastic surgery from cosmetic surgery, microvascular and reconstructive surgery of the breast, body and extremities, hand surgery, surgery of melanoma to the modern treatment of burns and contemporary approach to the treatment of chronic wounds. The Congress programme was implemented through 14 professional sections, two satellite symposia, 5 workshops, a number of distinguished speakers addressing lectures and final roundtable.

EWMA offered a separate guest session attended by 30 - 40 participants including:

- Introductory lecture about EWMA activities by Dubravko Huljev. All participants were already familiar with EWMA activities, and showed great interest in the presented activities, and the importance of promoting the managing of patients with wounds including education, adoption of consensus and guidelines, and connections between national associations and individuals involved in treating patients with wounds.

- Main lecture by Rose Cooper about the EWMA document “Antimicrobials and non-healing wounds: evidence, controversies and suggestions”.

- Main lecture by Dubravko Huljev about the EWMA document “Managing wounds as a team”.

During the lectures, and later in the discussion, we clarified the basic concepts of interdisciplinary, multidisciplinary and transdisciplinary approach to treating patients, particularly patients with chronic wounds. The participants showed great interest in this subject, and provided their own examples from everyday work, and their experiences and difficulties in implementing this approach to treating patients. After discussion, everyone agreed that the team approach is indispensable if we want to achieve the best results in the treatment of patients with chronic wounds.
35th annual meeting of the European Bone and Joint Infection Society

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1-3 September 2016
Oxford, United Kingdom

Early registration deadline
1 August 2016

www.ebjis2016.org
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## Conference Calendar 2016/17

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<td>EWMA + DeWu + Wunddach</td>
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<tr>
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<td>23-25</td>
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<tr>
<td>35th Annual meeting of the European Bone and Joint Infection Society</td>
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<tr>
<td>A-DFS</td>
<td>2nd Conference of the Association for Diabetic Foot Surgeons</td>
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<td>SAWC</td>
<td>Sprung Symposium</td>
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<td>Amsterdam</td>
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- Post burn reconstructive surgery with dermal equivalents surgical steps
- Neck Reconstruction
- Microsurgery
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- AFIScep.be
  French Nurses’ Association in Stoma Therapy, Wound Healing and Wounds
  www.afiscep.be

- AISLeC
  Italian Nurses’ Cutaneous Wounds Association
  www.aislec.it

- AIUC
  Italian Association for the study of Cutaneous Ulcers
  www.aiuc.it

- AMP Romania
  Wound Management Association Romania
  www.ampromania.ro

- APTFeridas
  Portuguese Association for the Treatment of Wounds
  www.aptferidas.com

- AWTVNF
  All Wales Tissue Viability Nurse Forum
  www.welshwoundnetwork.org

- AWA
  Austrian Wound Association
  www.a-w-a.at

- BEFEWO
  Belgian Federation of Woundcare
  www.befewo.org

- BWA
  Bulgarian Wound Association
  www.woundbulgaria.org

- CNC
  Clinical Nursing Consulting – Wondzorg
  www.wondzorg.be

- CSLR
  Czech Wound Management Society
  www.cslr.cz

- CWA
  Croatian Wound Association
  www.huar.hr

- DGFV
  German Wound Healing Society
  www.dgfw.de

- DSFS
  Danish Wound Healing Society
  www.saar.dk

- ELCONS
  Portuguese Wound Society
  www.sociedadeferidas.pt

- FWCS
  Finnish Wound Care Society
  www.shh.fi

- GAIF
  Associated Group of Research in Wounds
  www.gaif.net

- GNEAUPP
  National Advisory Group for the Study of Pressure Ulcers and Chronic Wounds
  www.gneaupp.org

- HSWH
  Hellenic Society of Wound Healing and Chronic Ulcers
  www.hswh.gr

- ICW
  Chronic Wounds Initiative
  www.ic-wunden.de

- LBAA
  Latvian Wound Treating Organisation

- LUF
  The Leg Ulcer Forum
  www.legulcerforum.org

- LWMA
  Lithuanian Wound Management Association
  www.izga.lt

- MASC
  Maltese Association of Skin and Wound Care
  www.mwcf.madv.org.mt/

- MSKT
  Hungarian Wound Care Society
  www.eusutet.hu/mskt/

- MWMA
  Macedonian Wound Management Association

- NATVNS
  National Association of Tissue Viability Nurses, Scotland

- NIFS
  Norwegian Wound Healing Association
  www.nifs-saar.no

- NOVW
  Norwegian Wound Healing Association
  www.novw.org

- PWMA
  Polish Wound Management Association
  www.ptlf.org.pl

- SAFW
  Swiss Association for Wound Care (German section)
  www.safw.ch

- SAWF
  Swiss Association for Wound Care (French section)
  www.sawf-romande.ch

- SAWMA
  Serbian Advanced Wound Management Association
  www.lecjenjara.com

- SEBINKO
  Hungarian Association for the Improvement in Care of Chronic Wounds and Incontinencia
  www.sebinko.hu

- SEHER
  The Spanish Society of Wounds
  www.sociedadespanolaheridas.es

- SFFPC
  The French and Francophone Society for Wounds and Wound Healing
  www.sffpc.org

- SSIS
  Swedish Wound Care Nurses Association
  www.sarsjukskoterskor.se

- SSOOR
  Slovak Wound Care Association
  www.ssoor.sk

- SSPLR
  The Slovak Wound Healing Society
  www.ssplr.sk/en

- STW Belarus
  Society for the Treatment of Wounds (Gomel, Belarus)
  www.burnplast.gomel.by

- SUMS
  Icelandic Wound Healing Society
  www.sums.is

- SWHS
  Serbian Wound Healing Society
  www.lecjenjara.com

- SWHNS
  Swedish Wound Healing Society
  www.sarlakning.se

- TVS
  Tissue Viability Society
  www.tvs.org.uk

- URubIH
  Association for Wound Management of Bosnia and Herzegovina
  www.urubih.ba

- UWTO
  Ukrainian Wound Treatment Organisation
  www.uwto.org.ua
Cooperating Organisations (cont.)

V&VN
Decubitus and Wound Consultants, Netherlands
www.venvn.nl

WCS
Knowledge Center Woundcare
www.wcs.nl

WMAI
Wound Management Association of Ireland
www.wmai.ie

WMAK
Wound Management Association of Kosovo

WMAS
Wound Management Association Slovenia
www.dors.si

WMAT
Wound Management Association Turkey
www.yaradernegi.net

ILF
International Lymphoedema Framework
www.lympho.org

KWMS
Korean Wound Management Society
www.woundcare.or.kr/eng

NZWCS
New Zealand Wound Care Society
www.nzwcs.org.nz

SILAUHE
Iberoamerican Society of Ulcers and Wounds
www.silauhe.org

SOBENFeE
Brazilian Wound Management Association
www.sobenfee.org.br

WAWLC
World Alliance for Wound and Lymphoedema Care
www.wawlc.org

Eucomed
Eucomed Advanced Wound Care Sector Group
www.eucomed.org

HomeCare Europe
www.homecareeurope.org

ICC
International Compression Club
www.icc-compressionclub.com

MSF
Médecins Sans Frontières
www.msf.org

WUWHS
The World Union of Wound Healing Societies
www.wuwhs.org

Associated Organisations

Leg Club
Lindsay Leg Club Foundation
www.legclub.org

LSN
The Lymphoedema Support Network
www.lymphoedema.org/lsn

Other Collaborators

AAWC
Association for the Advancement of Wound Care
www.aawconline.org

DFSG
Diabetic Foot Study Group
www.dfsf.org

EADV
European Academy of Dermatology and Venerology
www.eadv.org

EBA
European Burns Association
www.euroburn.org

ECET
European Council of Enterostomal Therapy
www.ecet-stomacare.eu

ESPRAS
European Society of Plastic, Reconstructive and Aesthetic Surgery
www.espras.org

ESVS
European Society for Vascular Surgery
www.esvs.org

EPUAP
European Pressure Ulcer Advisory Panel
www.epuap.org

ETRS
European Tissue Repair Society
www.etr.org

DFSG
Diabetic Foot Study Group
www.dfsf.org

EADV
European Academy of Dermatology and Venerology
www.eadv.org

EBA
European Burns Association
www.euroburn.org

ECET
European Council of Enterostomal Therapy
www.ecet-stomacare.eu

ESPRAS
European Society of Plastic, Reconstructive and Aesthetic Surgery
www.espras.org

ESVS
European Society for Vascular Surgery
www.esvs.org

EPUAP
European Pressure Ulcer Advisory Panel
www.epuap.org

ETRS
European Tissue Repair Society
www.etr.org

International Partner Organisations

AAWC
Association for the Advancement of Wound Care
www.aawconline.org

Wounds Australia
Wounds Australia
www.awma.com.au

CAWC
Canadian Association of Wound Care
www.cawc.net

Debra International
Dystrophic Epidermolysis Bullosa Research Association
www.debra.org.uk

EFORT
European Federation of National Associations of Orthopaedics and Traumatology
www.efort.org

CTRS
(Chinese Tissue Repair Society)
www.chinese-trs.com/en

IWII
Int. Wound Infection Institute
www.woundinfection-institute.com

Media Partner

JWC
Journal of Wound Care
www.magonlinelibrary.com

For more information about EWMA’s Cooperating Organisations please visit www.ewma.org
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